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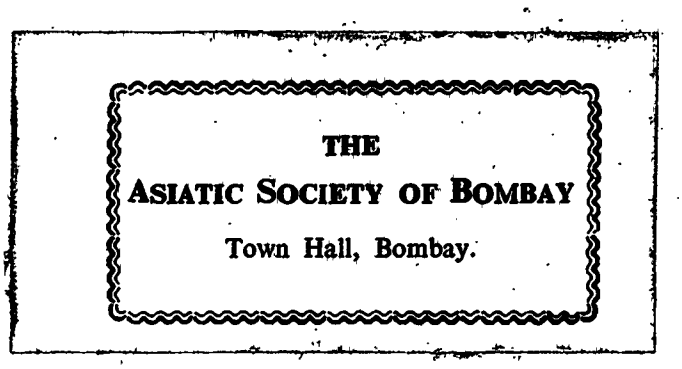

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TOWNSEND'S
TRAVELS THROUGH SPAIN.

JOURNEY THROUGH SPAIN,

IN THE YEARS 1786 AND 1787;

WITH PARTICULAR ATTENTION

TO THE

AGRICULTURE, MANUFACTURES, COMMERCE, POPULATION, TAXES AND REVENUE OF THAT COUNTRY;

AND

REMARKS

85378

IN PASSING THROUGH

A PART OF FRANCE.

THIRD EDITION.

BY JOSEPH TOWNSEND, A.M.

RECTOR OF PEWSEY, WILTS; AND LATE OF CLARE-HALL, CAMBRIDGE.

IN TWO VOLUMES.—VOL. I.

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TO

THE MOST NOBLE

HENRY, MARQUIS OF LANSDOWN,

THESE SHEETS ARE DEDICATED,

IN TOKEN OF

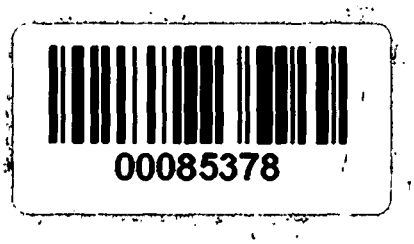
ESTEEM AND GRATITUDE,

BY

HIS LORDSHIP'S

SINCERE FRIEND AND DEVOTED SERVANT,

JOSEPH TOWNSEND.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CONTENTS

OF

VOL. I.

	PAGE.
DIRECTIONS for travelling in Spain - - - - -	1
Causes of the Overthrow of the Spanish Monarchy - - -	5
Journey from London to Paris - - - - - - -	25
Cabinets of Natural History in Paris - - - - -	30
Environs of Paris with respect to Fossils - - - - -	38
Carnival at Paris - - - - - - - - - -	43
Journey from Paris to Belgarde, with Manufactures of Lyons -	46
Journey from Belgarde to Barcelona - - - - -	75
Barcelona, with the Processions, Academies, Court of Inquisition, Courts of Law, Hospitals, Houses of Correction, Trades, Manufactures, Commerce, and Population - - -	88
Coins, Money, Weights and Measures of Catalonia - - -	120
Environs of Barcelona, with respect to Fossils, Agriculture, and Botanical Productions - - - - - - -	125
Journey from Barcelona to Madrid, with a Description of Zaragoza, and the great Canal of Arragon - - - - -	141

PAGE.

Madrid described with respect to its Buildings, Palaces, Paintings, Academies, Manufactures of Saltpetre, Tapestry, and China; Cabinets of Natural History, and Public Walks - - 182

Environs of Madrid, Aranjuez, Anover, and Toledo, with a View to Manufactures, Natural and Civil History, and the Manners of the Court - - - - - - - - - - 209

Return to Madrid, with a Description of a Bull Feast - - 243

Journey from Madrid to the Asturias, through Valladolid and Leon 252

Oviedo and its Environs, with a Description of Aviles, Luanjo, and Gijon, with respect to Manufactures, Commerce, Natural History, and the Manners of the Inhabitants in the Asturias 283

Journey from the Asturias to the Escurial, through Leon; with an Account of the Merino Sheep, and Salamanca, with a Description of that University, and of the Irish College - - 323

S. Ildefonso and the Palace, with its Gardens - - - - 357

Segovia, and its Manufactures - - - - - - - 361

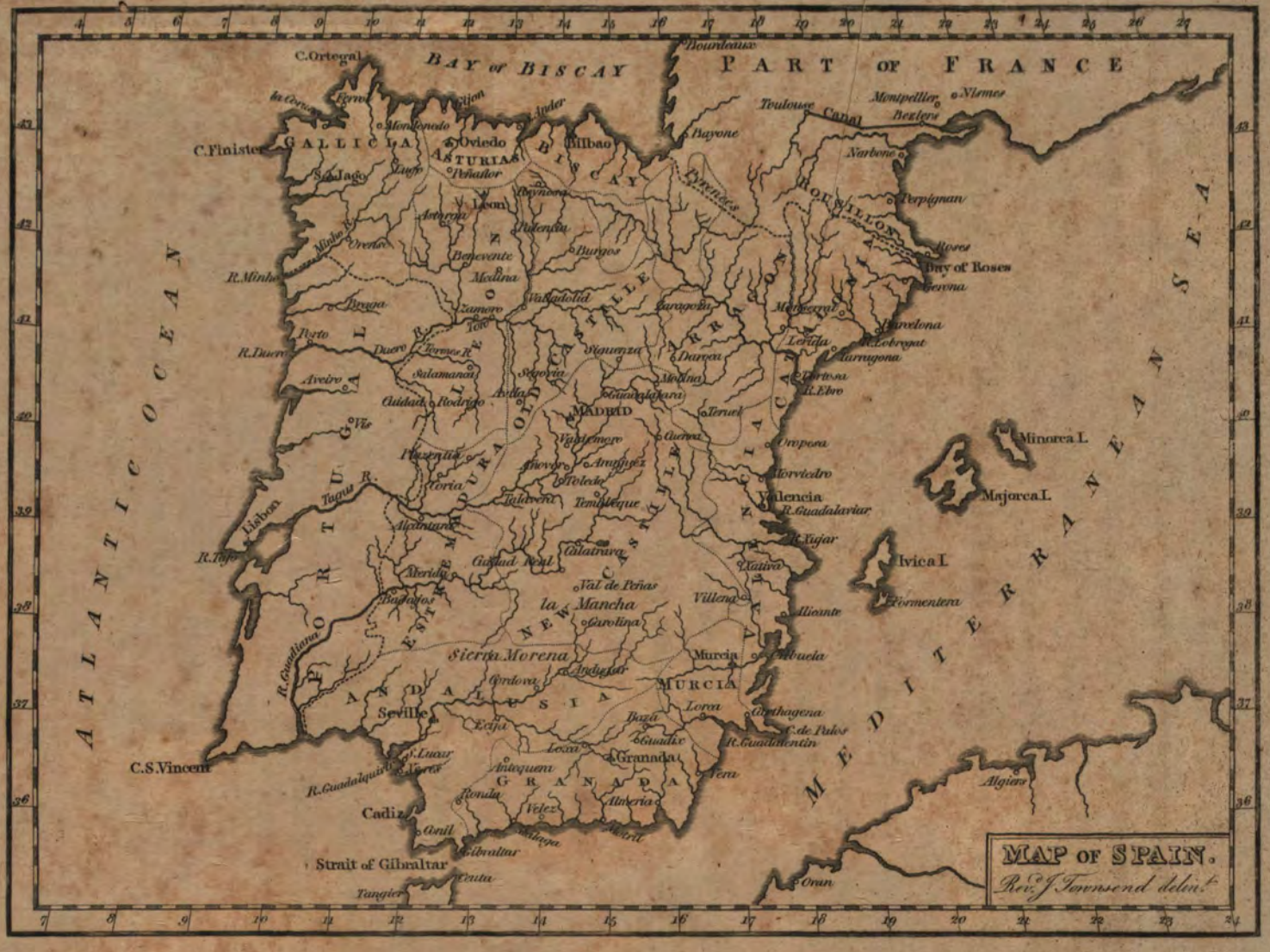
The Escurial, and Convent of S. Lorenzo, with the Diversions of the King - - - - - - - - - - - 364

Return to Madrid, with an Account of the principal Characters about the Court, the Manners of the Age, the Palaces of the Great, and their Establishments - - - - - 374

Digest of the Taxes and Revenue of Spain - - - - - 392

Debts of Spain, and Observations on Finance - - - - 414

The Bank of S. Carlos and a Statement of their Gains - - 422


MAP OF SPAIN.
Rev.d J. Townsend delin.t
BAY of BISCAY
PART OF FRANCE
ATLANTIC OCEAN
MEDITERRANEAN SEA
C.Ortegal
C.Finisterre
C.S.Vincent
Strait of Gibraltar
Bourdeaux
Bayone
Toulouse
Canal
Montpellier
Nismes
Beziers
Narbone
Perpignan
ROUSSILLON
Roses
Bay of Roses
Gerona
Barcelona
Tarragona
Tortosa
R.Ebro
R.Lobregat
Lerida
Morella
Valencia
R.Guadalaviar
C.Xabia
Xativa
Villena
Alicante
Murcia
Albuera
Carthagena
C.de Palos
R.Guadalentin
Lorca
Baza
Guadix
Granada
Tera
Algiers
Oran
Minorca I.
Majorca I.
Ivica I.
Formentera
Orihuela
Elche
Alcaraz
Chinchilla
Almanza
Requena
Cuenca
Teruel
Molina
Guadalajara
MADRID
Segovia
Avila
Toledo
Talavera
Aranjuez
Ocaña
Aranda
Segunza
Darocca
Zaragoza
Medinaceli
Valladolid
Palencia
Burgos
Benevente
Medina
Astorga
Leon
Oviedo
ASTURIAS
Bilbao
Santander
Reynosa
Pyrenees
Lugo
Santiago
Pennafior
Mondonedo
Ferrol
Gijon
Ander
Orense
Minho R.
R.Minho
Braga
Porto
R.Duero
Duero
Toro
Zamore
Torres R.
Salamanca
Aveiro
Ciudad Rodrigo
Viz
Thomar
Coria
Tagus R.
Lisbon
R.Tajo
Alcantara
Merida
Badajos
Guadiana R.
Guadalquivir R.
Seville
Ecija
Cordova
Sierra Morena
Andujar
Val de Peñas
la Mancha
Carolina
Guadiz
Baeza
Loca
Antequera
Ronda
Velez
Almeria
Malaga
Gibraltar
Ceuta
Tangier
Cadiz
Anil
Tarifa
Xeres
S.Lucar
Estremadura
Castile Nueva
Castile Vieja
Leon
Galicia
Portugal
Andalusia
Murcia
Granada
Valencia
Aragon
Catalonia
Biscay

DIRECTIONS

TO THE

ITINERANT IN SPAIN.

To travel commodiously in Spain, a man should have a good constitution, two good servants, letters of credit for the principal cities, and a proper introduction to the best families, both of the native inhabitants and of strangers settled in the country.

The language will be easily acquired.

His servants should be a Spaniard and a Swiss, of which, one should be sufficiently acquainted with the art of cooking, and with the superior art of providing for the journey; which implies a perfect knowledge of the country through which he is to pass, that he may secure a stock of wine, bread, and meat, in places where these excel, and such a stock as

may be sufficient to carry him through the districts in which these are not to be obtained. For himself, his servants and his baggage, he should purchase three strong mules, able to support the load which is to be put upon them. In his baggage he should have sheets, a mattress, a blanket and a quilt, a table-cloth, knives, forks, and spoons, with a copper vessel sufficiently capacious to boil his meat. This should be furnished with a cover and a lock. Each of the servants should have a gun slung by the side of his mule.

To travel as an œconomist in Spain, a man must be contented to take his chance for conveyance, and either go by the post, wherever it is established; or join with officers, going to their various stations, to hire a coach, or quietly resign himself to a calash, a calasine, a horse, a mule, or a *Borrico*. These last are the most convenient for the purpose of crossing the country, or of wandering among the mountains. If he is to traverse any district infested by banditti, it will be safe for him to go by the common carriers, in which case he will be mounted on a good mule, and take the place which would have been occupied by some bale of goods. Any one, who is fond of botany, for short excursions, will make choice of a *Borrico*. These are always to be had, when, as in some villages, neither horse nor mule are to be obtained. I have used this honourable appellation for the most patient of all animals, because I would not shock the delicacy of a young traveller, by telling him, at his first setting out, that he may sometimes find himself under the necessity of riding upon an ass. He must, however, know, for his consolation, that an ass does not appear so contemptible in Spain as in the colder regions of the north.

The best time for him to begin this expedition is in Autumn, when he may go by Bayonne, Burgos, Valladolid, and Segovia, hastening to the court of St. Ildefonso. Here he is to procure letters for the chief cities in Spain. On these will depend the whole pleasure of his excursion. During the winter he may see all the south of Spain, Toledo, Cordova, Seville, Cadiz, Gibraltar, Malaga, Granada, Carthagena, Murcia, Alicant, Valencia, and Barcelona. Returning by Zaragoza to Aranjuez in the spring, he may follow the Merino flock, when not interrupted by the rainy season, to the mountains of the north, whilst the country, on which he has turned his back, is rendered unfit for travelling, by the dissolving heats, by want of provisions, and by malignant fevers. This season will be best employed in Gallicia, the Asturias, and the provinces of Biscay, taking Salamanca and Leon in the way.

Had I received such directions previous to my Spanish journey, I should have escaped a severe fit of illness, which was occasioned by the intensity of the Summer's heat. In England, intermittents are commonly ascribed to marsh miasma, but in Spain their origin is attributed to the stroke of the mid-day sun; and I am inclined to think this may often be the genuine cause.

CAUSES OF THE OVERTHROW

OF THE

SPANISH MONARCHY.

THE events which have recently occurred in Spain have excited universal astonishment. Every one is solicitous to trace their progress, and to ascertain the cause, which has produced them. A mighty empire overthrown in the space of a few days, and the reigning family carried captive by foreigners without resistance from the natives, are such events as are unparalleled in history.

What cause then can be assigned which is adequate to such effects? The cause is obvious:—bad government. This has ruined, in succession, all the mighty empires which have existed in the world, and will continue to do so till the end of time.

When a territory, of contracted limits has been overrun, by some powerful nation: this implies merely a physical inability to defend itself. —But when a widely extended country, well peopled, has been suddenly subdued, we have always been able to trace this ruin to its proper cause—bad government.

In Spain, a former generation saw the country, in the space of three years, conquered by the Moors. It was at that time ill governed, disheartened, and disarmed: but, as the new comers governed well, it required more than seven hundred years of almost incessant war to drive them out. There can be no doubt, therefore, that to bad government we must ascribe this recent revolution.

The next question which occurs to be resolved is, how Spain came to be worse governed than the surrounding kingdoms.

This subject requires some retrospect,—some short investigation.

When the intolerable abuses of the feudal system, oppressive at once to subjects and to sovereigns, required reformation, the sagacity of statesmen led them to different expedients for relief. In one point they all agreed: they humbled the proud vassals of the crown, but suffered the power of the people to increase. Such was the policy of Henry VII, of Ferdinand and Isabella, of Ximenes, and of Richelieu. Thus far all was well. But whilst in England our Parliaments maintained their power, such national assemblies were laid aside in France and Spain. Indeed France retained her provincial Parliaments, but these formed a feeble barrier against the encroachments of the crown. In Spain, from the days of Charles V. the Cortes were never suffered to assemble, excepting only once at the commencement of a reign, to proclaim the title of the successor to the throne.

One additional cause of bad government was found in Spain.

When the reigning family was changed, and Louis XIV. forced his grandson upon a reluctant people, the Bourbon family thought it expedient to assemble the Grandees round the throne, where, in fact, they were prisoners of state. Thus assembled and divested of all power, they quickly degenerated and became perfectly useless to the state.

Whilst Charles III. was living, the government, it must be confessed, was weak, but it was not oppressive. His understanding was such as to guide him well in the choice of his ministers, and every one was satisfied of his benevolent intentions. His ultimate successor was not so highly favoured. Of his heart I can say nothing, but every thing demonstrates the deficiency of his intellectual powers. Whilst I resided at Madrid, I went every day to Court, and, solicitous to form some judgment of this destined successor to the throne, I constantly attended in the circle; where he conversed with his friends and the foreign ministers after dinner. Here it was not possible to mistake his character in point of understanding. His education and his habits had no tendency to remedy this defect; for the greatest part of his time was spent in the diversions of the field, and none appeared to have been allotted to the improvements of the mind.

When he returned from hunting, and when the weather prevented his sport his occupations were such only as were suited to infancy.

After his accession to the crown, his principal amusement in the depth of winter, at Madrid, was a *Nacimiento*, or representation of the Nativity. For this purpose, in a saloon of three hundred and sixty

feet long, were seen a mountain, rocks, cascades, and verdant groves, Jerusalem and Babylon, a sea coast and ships, numerous images of angels, wise men, and shepherds, with the Virgin and the infant Jesus, all curiously wrought by the best artists of Italy and Spain. These were richly clad in modern style. The jewels of gold, silver, pearls, emeralds, and diamonds, with which he adorned these figures, were of inestimable value, and the camels attendant on the wise men were loaded with treasures.

The whole of this saloon was lighted by hundreds of lamps, concealed from the spectators.

During the twelve days of Christmas, the king always spent his nights in this saloon. And here the grandees, ambassadors, ministers of state, and persons of distinction, were admitted to pay their compliments, each vying with the other in expressions of admiration at the wonders of his *Nacimiento.*

The principal artist was obliged every year to exhibit the powers of his imagination by some new plan.

When I was at Madrid, I had the honor of being introduced to Sabatini, a distinguished architect, whose merit had been little noticed by the Court; but this man, in the succeeding reign, having had the good fortune to give satisfaction to the sovereign, by the construction of a saloon for his *Nacimiento*, as a reward for his ingenuity he was made an admiral.

It must not, however, be imagined that Sabatini was to have the command of fleets upon the ocean. No: he was to be one of the admirals who commanded the little fleet upon the Tagus, with which the king amused himself during his vernal residence at Aranjuez.

From good authority I am informed, that more than thirty thousand pounds was every year expended on this childish plaything of the king.

Whilst *he* thus amused himself, the cares of government devolved wholly on the queen, who, immediately on his accession to the throne took her seat in council by his side, attended whenever the ministers were admitted to an audience, and prior to their admission was informed of the business on which they came.

As long as Florida Blanca retained his power, his whole attention was directed to the well being of the state. His virtue was rigid, his fidelity inflexible. Intent on the improvement of the country, he allotted great sums to canals and roads; but not finding the public revenue adequate to the demand for these important works, he suggested to the king that, for the public good, other expedients should be resorted to; and when the Duchy of Alcudia escheated to the Crown, he advised that the rents should be applied to expedite the finishing of the great canals.

His wise purposes were, however, frustrated, and this high dignity with its emoluments were given to a favourite of the court.

When I was in Spain this favorite was perfectly unknown. But soon after the death of the good old king, when a young Spaniard, a very intimate friend of mine, was about to visit England, and had taken leave of the royal family, his father, well acquainted with the secrets of the Court, inquired of him if he had called on Manuel Godoy.—"No."—"Go then immediately, and ask for his protection." My friend obeyed the mandate of his father, and was most graciously

received. This handsome young Guarde du Corps was at dinner with some of the Grandees, who doubtless foresaw his future greatness.

The house was his own, magnificently furnished, and the room in which he dined was decorated with the most elegant and costly trinkets. For some years, this favourite of fortune was concealed from public view; he had shone hitherto in the small circle of his friends. But now the time arrived when, by his sudden elevation, he was to attract the notice of the world. When Florida Blanca had requested that the revenues of the Duchy of Alcudia should be reserved for national improvements, he found himself thwarted in his purposes, and lamented to hear that this extensive territory was destined for a *Guarde de Corps*, attendant on the queen, who was to be created a Grandee of Spain.

This he strenuously opposed in council, as illegal, and for a time prevailed. But finally, in spite of his remonstrances, the grant took place. To vindicate these grants, the Count de la Canada, was employed, who had no difficulty in proving to the satisfaction of the Court, that the family of Godoy was most illustrious, and, as such, justly entitled to the Grandeeship in Spain. For this service he was created governor of the Council of Castille, and thus the way was made plain for the triumph of the favourite. In the mean time the people openly expressed their dissatisfaction; and on the 26th Feb. 1792, at night, the mob marked their indignation by attacking the house of the Guarde de Corps, which they are said to have totally demolished.

The next day, at two o'clock in the morning, Count Florida Blanca received orders to depart immediately from Madrid, and to retire

within the precincts of his own estate. He was, however, permitted, at his particular request, to take up his abode in a convent of monks at Ellin, a small village in Murcia, where he remained four months; at the end of which term he was conveyed as a state prisoner to the Castle of Pampeluna.

Thus every obstacle having been removed, Manuel Godoy was created a Grandee of the first class, and Duke de la Alcudia, with a territory of about twenty thousand a year to support his dignity. It was not thought expedient to make him the immediate successor to so intelligent a minister as Florida Blanca. Count d'Aranda was therefore recalled from Paris, where he had been some years in honourable banishment as ambassador from the Court of Spain.

On his elevation to this office of high dignity and power, his sagacity soon discovered that he was only *locum tenens* to another; and that other he endeavoured to remove. He took occasion, therefore, to extol the superior talents of his rival, lamented the disadvantages he had laboured under in his youth, and recommended that he should travel for some years in Europe, after which he would return with such a stock of political wisdom as might qualify him for the highest employments in the State. The confidential friends of the young man were too much practised in the intrigues of courtiers, to let him fall into this snare. Count d'Aranda was dismissed, and the Duke of Alcudia became prime minister. Splendid honors were heaped upon his head, and every power of the state was put into his hands. He became *Sargento Mayor*, that is, inspector of the Body Guard, chamberlain and private secretary to the queen, commander in chief of all

the forces, &c. From royal munificence he received coaches, horses, and jewels, of inestimable value; and whenever the king had a child born to him, the Duke of Alcudia received some fresh token of his regard.

On one occasion, when the accoucher had delivered the queen, and was retiring, he saw displayed upon a table a quantity of gold, which filled him with astonishment, because he could scarcely conceive that such a recompense was designed for him. In fact it was not designed for him, but for the favorite, that he might participate in the sovereign's joy on this occasion. The sum was eighty thousand ducats. At one of these seasons the Duke received the Cortijo, or royal farm, near Aranjuez, and which cost the old king more than two hundred thousand pounds. At the same time to this was added the best encomienda of Santiago, which required a vow of perpetual celibacy and chastity. Such gifts as these excited indignation, and the enraged multitude expressed the general sentiment in the subsequent placard, which was found on the walls of the palace at Madrid:—

Si la Reyna tiene otro parto
Si queda sin corona Carlos quarto,

"Should the queen have another son, Charles IV. will remain without a crown."

This indignation and disgust was not confined within the narrow limits of Madrid.

Whilst the Duke of Alcudia displayed his omnipotence at court, every department in the state was occupied by some one of his creatures, whose chief recommendation was attachment to his person.

During twenty years the queen had for her confessor a man of inflexible integrity, to whom, as a reward for his fidelity, was given a bishopric, but with obligation to constant residence in his diocese. This he resigned, that he might return to Madrid, where, however, he was not permitted to remain, being commanded to retire into the Asturias, his native country, that he might there enjoy tranquillity for the remainder of his days. On his retreat he was succeeded by Muzquiz, a confessor of distinguished talents, and much attached to the new favorite.

Acuna, a low-bred ecclesiastic, of neither talents nor literature, but a fortunate gambler, who occasionally lent money to Godoy, was first rewarded by a canonry of Santiago, one of the greatest dignities in Spain, and then appointed minister of grace and justice, an office which not only controuls all the tribunals in the kingdom, but governs the whole ecclesiastical system of the realm.

In November, 1792, the Duke of Alcudia became prime minister, and a few months after this, he took Don Antonio Barradas for his minister of war. This man had served with him as Guarde de Corps, and became the confidential friend of Charles IV. Godoy, well aware of his influence, cultivated his friendship. Immediately on the death of Charles III. Barradas was rapidly promoted to be brigadier-general, then marshal, and knight of the order of Charles III. He received a gold key, and his wife became lady of honour to the queen. This man had acquired the friendship of the king, while prince of Asturias, by submitting with good humour when, as frequently happened, he was exposed to laughter by impertinent jokes and vulgar tricks upon his person, and by attending fairs to purchase horses for him whenever his ser-

vices in the capacity of groom were wanted. By such base servility he ingratiated himself, and being a convenient person to the duke, he was amply rewarded for his fidelity to the confidence reposed in him; for without one good quality, which could recommend him to the office, he was appointed minister of war.

With such ministers as these, we must not be surprised, that Spain was unable to withstand the shock of revolutionary troops. All their armies were defeated, and the French Generals were marching to Madrid.

The minister at war attributed their rapid progress, not to his own neglect, not to deficiency of men, not to their want of spirit, but to his absolute inability to arm them. Barcelona, the Birmingham of Spain, was in the occupation of the enemy: and fifty thousand stand of arms, which had been purchased in England, had been seized by the English minister, and sent to La Vendee, where they soon fell into the hands of Robespierre.

Unfortunately for the common cause, the facts were precisely as stated by the minister of war. I saw a letter from an officer in the Spanish army to my Spanish friend, then on a visit at my house, in which he lamented the want of arms; and the late Sir Archibald Dixon informed me that he had landed, in La Vendee, thirty thousand of the muskets which had been purchased by the Spanish minister in England.

In these circumstances the Duke of Alcudia complained, that Spain was betrayed by her ally, and, no longer able to resist, he advised his sovereign to quit the coalition, and to make peace with France.

On this occasion splendid illuminations in every city testified the uni-

versal joy, and on the frontiers, between the contending armies, the populace assembling, made bonfires with the implements of war.

This opportunity of acquiring popularity for the favourite was not to be neglected. The king, therefore, immediately granted him fresh honours, and, to coincide with the general sentiment of the nation, the *title of the Prince of the Peace* was fixed upon. To keep up a perpetual remembrance of this event, and to remind succeeding generations of the motives which induced the king to grant such a title to his minister, his majesty was pleased to send the subsequent mandate to the Council of Castille:—

" In consideration of the exalted qualities of Don Manuel Godoy Alvarez de Faria, Prince of the Peace, Duke of Alcudia, Grandee of Spain of the first class, Knight of the Orders of the Golden Fleece, of Charles III. of Malta, and of Santiago, Captain-General of the Royal Armies, Inspector of the Guarde de Corps, Counsellor and First Secretary of State, Chamberlain and Secretary to my beloved wife and Queen, having in view the rank of his ancestors, his high employments, the distinguished services he has rendered me, the antiquity of his illustrious house, and the merit of his having established peace between this crown and the French nation; it was my pleasure, by my royal proclamation, the 4th of this present month, to honour him with the dignity of Prince of the Peace, which title is to continue, and to be transmitted to his heirs and successors.

" Anxious to give him a fresh proof of the satisfaction with which I regard his incessant attention to my service, it is my royal will and pleasure that his *coat* of *arms* shall acquire new dignity, by adding,

above his ducal coronet, the image of Janus, whose two faces are the symbol of his consummate wisdom in the present circumstances of public affairs, a symbol of the prudent man, who, with native sagacity, examines the past, foresees the future, discerns the principles, causes, and connexions of things, anticipates effects, compares, with a discerning eye, times and events, penetrates the most recondite political secrets, discovers things before unknown, and reaches to the highest pinnacle of human understanding for the happiness of nations.

" Now, as Janus is the symbol of *Peace*, it is my royal will and pleasure that the bust of this false divinity shall indicate the title of the Prince of the Peace.

" The image shall bear on its head the civic crown, with which the Romans rewarded merit to the preservers of peace.

" It is also my royal will and pleasure that two other allegorical figures shall be added to his coat of arms, annulling, in the present case, whatever laws of heraldry appear to be contrary to this innovation. The figure on the right side shall be allegorical of Spain, whose left arm shall embrace the ducal coronet, and whose right hand shall bear a blue standard with the arms of Castille and Leon.

" The figure on the left side of the coat of arms shall be a page, such as in former times attended illustrious knights, carrying their coats of arms to the tournaments, houses of high distinction, and places of festivity. This armour-bearer shall have upon his breast the coat of arms of the barony of Godoy; and in his left hand a spear with a pendant, in which the different arms of the alliances of the house of Godoy shall be represented. It is my royal will and pleasure that the Prince of the

Peace, on all public occasions, shall be preceded by an armour-bearer, either on foot, on horseback, or in a coach. And for this office the Prince of the Peace shall choose a person whose rank and character shall not disgrace the splendour of his arms.

"And although the supporters granted to noblemen are not hereditary, yet it is my royal will and pleasure that the supporters, which by these presents are granted to the Prince of the Peace, shall descend with his titles, and be used by his successors."—Sm. Ildefonso, 12th October, 1795. I, the King.

"To the Bishop Governor of the Council of Castille."

This curious proclamation I received from a Spanish friend of high connexions, in whose veracity I have the most perfect confidence.

What has been already stated is sufficient to demonstrate that the fond affection of the King for the Prince of the Peace, knew no limits. In the mean time the people held him in supreme contempt; for while he was thus rising to the highest pinnacle of power, they continued to paste their placards on the palace gates. Among these inscriptions was observed the following:

La Reyna lo quiere; el Rey tambien,
El Pueblo lo sufre, *arriba con el.*

The Queen is attached to him and not less so
The King. The People submit to this:
Up with him.

An expression this, which children make use of on Good Friday, when they toss Judas in a blanket.

Not satisfied with disgusting all good subjects by such mad proceedings, the royal family disgraced itself to the last degree in the eyes of the whole nation, by going on pilgrimage to *Badajoz*, the place of Godoy's nativity.

A very intimate friend of mine was in their suite, and from him I learn, that the persons attendant on this expedition were no fewer than four thousand, passing through a country where ten travellers could scarcely find subsistence. However, on this occasion, some little degree of modesty, some slight attention to the public feeling, was observed by declaring this pilgrimage was to the bones of S. Ferdinand of Seville.

We have seen this favourite, Godoy, rising from the condition of Guarde de Corps to the highest offices of trust and power. We are next to view him as allied to royalty.

The Infant Don Louis, brother to Charles III. in consequence of a system observed in the royal family of Spain, as being a younger brother, was not permitted to marry, but was compelled, contrary to his inclination, to become an ecclesiastic; and that he might never think of abandoning this profession, the king, his brother, conferred on him the Archbishopricks of Seville and Toledo. In order to bind him still more closely to the Church, the Pope created him a Cardinal. But as these dignities could not change his disposition, nor change the propensities of nature, he for a length of time resisted being ordained a priest, and, when exalted in the church, he determined to give both his mitres and his hood in exchange for a wife. But although he repeatedly solicited permission of the king to marry, this favour was constantly denied him. Wearied at last by the restraint, which this

opposition imposed upon him, he assumed a resolute tone, to which the king replied, that he should be permitted to marry, on condition that he should not connect himself with any female who was either of the royal family, or allied to a grandee.

Don Louis, without loss of time, sent to the king a list of names of such ladies as were not prohibited, adding, that he accepted the permission with which his majesty indulged him, and that he would marry any one of those ladies whom his majesty should name. The king viewed this list with the utmost indignation, when he beheld the first name to be *Mallabriga;* for this young lady, celebrated for the beauty of her person, was daughter to a captain of infantry. In consequence of this indignation, the Infant Don Louis was banished for ever from the Court, despoiled of all his honours, and deprived of authority even over his own domestics. He obeyed in silence, wrote to the young lady, and having received her consent to marry him, he left the palace the next day, and retired to Villaviciosa, where he had a palace, and where he resided fourteen years. Here he formed his curious cabinet of Natural History, which occupied his time, and made him soon forget the society he left behind him at Toledo.

After his death, his children, a son and two little daughters, were taken from their mother, and lodged in the palace of his successor, in the Archbishoprick of Toledo, where I had the happiness to meet with them. The young prince appeared amiable, but had a certain degree of gloom upon his countenance, which only served to render him more interesting. He was just arrived from Villaviciosa, and was about twelve years of age. His sisters were lodged in a convent of nuns.

The young prince was compelled to sign himself Mallabriga, and was not permitted to retain the name of Bourbon. Meek in his appearance, this youth was not destitute of spirit; and therefore, whenever his attendants at any time addressed him by the name of Mallibriga, he was apt to expostulate, and say that his name was the same with that of the kings of Spain and Naples.

He did me the honor to notice me, and was more particular in his attentions, because he was disposed to trace in me some personal resemblance to his father, and because he understood that my pursuits were the same as his.

After the death of Charles III. it was imagined that his son would have relaxed in the severity of treatment towards the children of his uncle; but his conduct was perfectly the reverse of this, being determined that this branch of his family should perish. In consequence of such a resolution, the young prince has been compelled to accept the Archbishoprick of Toledo.

Who would ever have imagined that one of these princesses should have been taken from a convent and have been married to the Prince of the Peace!

This connection, by opening views of boundless ambition, has proved his ruin, and may terminate in the extinction of that family which Louis XIV. seated on the throne.

Amidst the numerous evils which this favourite has brought upon the state, we must not overlook one service which may ultimately compensate for them all.

By immemorial custom the king's confessor had been either a monk or an inquisitor, who, undoubtedly, were the most improper keepers of the royal conscience. When jesuits were confessors to most of the crowned heads in Europe, every one, conversant with history, well knows the political intrigues they cherished, and the persecutions they promoted.

The union of these two characters of inquisitor and confessor, by establishing an absolute dominion over the conscience of the monarch, gave the most firm support to the inquisitorial power in Spain. The fact is certain, and the reason will be evident to those who know that confessors hold the keys of heaven and of hell.

When Charles IV. succeeded to the throne, in the very commencement of his reign, by the advice of his favourite, he issued a decree separating for ever the employments of inquisitor and confessor to the crown: and he took for his confessor an Ecclesiastic named Camacho, a person universally esteemed for his moderation and his prudence.

This was a good beginning, and had the times been favourable I have no doubt that he would have proceeded to restrain the power of that tribunal, or would have abolished it. As long as the inquisition shall remain, neither arts, manufactures, commerce, religion, nor morality can prosper. The Moors in Spain were the principal agriculturalists, and the only manufacturers. The Jews were merchants. These were all expelled, or burnt by that persecuting Court. The good bishop of Oviedo, when he was lamenting the immorality which universally prevailed in Spain, comforted himself in the reflection, that his countrymen were wholly free from the charge of infidelity. I did

not think it expedient to remind him that, whilst the French ran riotously after philosophic infidelity, other nations might quietly remain with all their faculties benumbed by the torpid infidelity of ignorance, and that both species were equally productive of immorality.

In Spain the inquisition requires that all, who are come to years of discretion, shall receive the Sacrament at Easter, and every person is obliged to deliver in a certificate of the place where the confession was taken, and the sacrament administered to him.

What is the consequence? Common prostitutes at Easter, hasten from Church to Church to confess and to receive the sacrament, and then proceed to sell these certificates to such persons, as, although immoral in their conduct, are not sufficiently impious to attend this sacred ordnance. Is it possible to conceive a more horrid profanation than such a sacramental test?

Should the present struggle, between France and Spain, terminate in the restoration of the constitution to its original integrity, there can be no doubt that the Cortes will find it expedient to abolish the inquisition, and to invite foreigners of all religious persuasions to settle in the country.

As a friend to Spain, and a warm wisher to her prosperity, I please myself in the anticipation of her future felicity, when good government shall give security to person and property; and, by establishing public credit, promote agricultural improvements through every part of the Peninsula. Happy will it be for her if, in the wisdom of her councils, she shall close her eyes against the false glitter of distant conquest and dominion, cultivate the arts of peace, finish her canals,

give vent to her commodities, and find true wealth in the industry of her inhabitants, instead of seeking imaginary wealth in the gold and silver of Peru.

With the extensive territory, varied climates, and highly productive soil, which she commands at home, should she abandon her foreign possessions, by which she has been, is, and ever will be enfeebled and impoverished: should she carefully avoid offensive war, and confine all her views and efforts to internal improvement, she will rapidly double and quadruple her inhabitants, she will increase her wealth, she will become invulnerable, and will enjoy uninterrupted peace.

In these circumstances she will be resorted to for traffic by all the nations of the earth, and will be in Europe, what China has been from remote antiquity in Asia.

JOURNEY

FROM

LONDON TO PARIS.

I SET out from London January 30th, 1786, and crossing the channel in the night, landed the next day at Calais, from whence, proceeding in the Diligence, I arrived early on the 3d of February at the hotel de Messageries at Paris. From Calais to the vicinity of Paris is hilly all the way, the distance is one hundred and seventy-seven miles. The country is open, mostly in tillage, and not well wooded; the soil is chiefly sand. Calais itself is in a plain, which is covered with pebbles. In the vicinity of Calais, the sand is light and apt to drive, but as you advance it becomes more firm, yet with hard rain it binds, and must be therefore uncertain in its produce. As you leave Boulogne, the soil improves in stiffness, till about Amiens, and nearer Paris, it becomes strong clay with little sand.

All the way through Picardy the rock is *chalk*, hard enough for building. As you advance into the Isle of France, this *chalk* meets with the vitriolic acid, and becomes a solid gypsum; of this they burn great quantities now for their own consumption, but formerly for exportation. Paris has had the honour of giving its name to this useful kind of cement, as being the place from which we originally imported it.

The course of husbandry, through Picardy, is for the first year, wheat; the second, barley, or oats, followed by a fallow. They manure with chalk, with dung from the farm-yard, and with the fold. During the six months of summer they pen their sheep with hurdles on the fallows; but during the six winter months the flocks are confined all night, both for shelter and for safety, in close pens, where they make a quantity of good manure. The sheep are small. The shepherd goes before them. Together they make a beautiful appearance. The produce of Picardy, in wool, is six hundred thousand pounds weight.

Their ploughs are excellent; in form similar to the Norfolk and Rotheram combined; with little iron except the coulter and the share. They have no chain nor drail, but only a wooden bar to serve the purpose of the latter, with a wooden collar to bring down the beam. The wheels are high, the beam is short, and the whole is both compact and light. They use two horses in the sand, three in the clay, and manage well without a driver. The harrows are triangular, and have wooden teeth, which is a sufficient index of the lightness of their soil. The shovel which they use, is like the Cornish. For want of streams their corn is ground by wind-mills. At Calais you have near twenty in full view, and near Paris you may see thirty-six between the city and

S. Denis. In Picardy there are many extensive meadows, which might be watered, but they do not appear to have adopted this improvement.

Abbeville and Amiens are manufacturing towns. In the former is made good damask, and the latter is famous for its woollen goods and camelots.

The cathedral church at Amiens is highly worthy of attention. The front of this edifice is singular. The foundation was laid in 1220, and the whole was finished in 1288. The length is four hundred and fifteen Parisian feet, the breadth of the cross is one hundred and eighty-two, the height four hundred and two.

Montreuil is pleasantly situated on a hill, and almost surrounded by an extensive meadow. It is a dismal town, as are most of the villages in Picardy. The houses are low; the shops are small, dirty, and ill furnished, which is a certain mark of prevailing poverty.

Soon after my arrival at Paris, I breakfasted with the Abbé Morellet. His library, consisting of eight thousand volumes, all well chosen, is a model of philosophical arrangement, founded on the three leading faculties of the human mind; the judgment, the memory, and the imagination. His reading desk is of a singular construction, but the most commodious of any I have met with. He sits in a large easy chair, the arms of which are strait, to support a light desk fastened on a board of about three feet in length. The desk has two flaps, the one upon the other, of which the uppermost will serve for writing, or being lifted up and suffered to fall back sufficiently to make an angle of 45° with the horizon, serves at once to form a skreen, when he sits before the fire, and to support any book, from which he wishes to take an extract. On his

right hand he has a light table on castors, to receive this little desk, when he wishes to quit the chair; and on his left is a large desk, for such books or papers as it may be needful to consult.

In the evening he presented me with a ticket of admission for three months, to a most agreeable society, consisting of four hundred members, which assembles in the *Sallon des Arts,* at the Palais Royal. They have a large hall for conversation; a commodious chamber for reading, well provided with public prints and modern publications; and a third room for music, with a gallery for chess. Under this suit of apartments is a coffee-house, from which any kind of refreshment can be procured.

The day following he carried me to the French academy, to hear M. de Guibert pronounce an oration in praise of his predecessor, M. Thomas. The room was crowded with the first nobility of France, who attended not merely out of curiosity, but as a compliment to the new academician. I was happy in being present on such an occasion, and was much pleased with the discourse, in which not one fine image escaped unnoticed by the auditors. It was composed of that florid kind of eloquence, which is peculiar to the French, and suited to their language. Describing his reluctance to succeed so distinguished a member as M. Thomas, he said, " When a station has been occupied by uncommon " talents, when the public hath been long accustomed to behold the " lustre of superior merit; the successor must expect to meet with no " indulgence; the object of their devotion is no more; the revered image " hath vanished from their sight; but the pedestal remains, and the " height of this will be a standard, by which to form an estimate of " him, who shall presume to place himself upon it." A general plaudit

interrupted his discourse. When he proceeded to give the character of M. Thomas, he said, "His natural imperfections served only to make "him cultivate the qualities opposite to them; insomuch that I never "could discover what would have been his failings, but by the virtues "in which he most excelled." Here the applause re-echoed from every part of the assembly.

When a man has once established his reputation, he is apt to gain more credit than is due to him; and, whatever be his fort, whether wit, pleasantry, or eloquence, if, by often moving us, he has prepared us to be moved, he may command us at his will, and, keeping our expectation on the wing, he may excite our laughter or applause on the most trifling occasion. This, in some few instances, was the case with M. de Guibert, who gained most applause, when in my opinion he deserved it least. Thus, lamenting the untimely death of his predecessor, he began, "When a tree, after having blossomed for a hundred springs, "and scattered its fruit upon the earth for as many autumns, smitten "with barrenness by time, falls and appears no more; it has fulfilled "its destiny, and in its due time submits to the irrevocable law: but for "a tree in perfect vigour, flowing with sap, yearly pushing forth new "roots, and promising by its fruits and verdure to be the wealth and "glory of the surrounding plains; let this be struck with thunder, and "be suddenly destroyed; fawns, shepherds, swains, all run to it, all "lament it, and the mutilated trunk, now sacred, is for a length of "time covered with libations, and watered with their tears." Here their plaudits burst forth with reiterated violence, and for a considerable time interrupted his discourse. The French are certainly more

lively in imagination than the English, more fond of painting; but not so much accustomed to the coldness of mathematical precision. Provided the imagery be rich and bold, they express their admiration, without staying to consider if it be accurately just. In all their assemblies they discover the quickest sensibility. Fond of the brilliant, not one fine sentiment, not one striking image, not one harmonious period, is ever lost or fails of its effect on them.

The French academy hold their meetings at the Louvre. Three hundred and twenty tickets were delivered out; but I imagine there must have been near four hundred in the room.

The days following I employed in visiting the cabinets of natural history in Paris, which are numerous.

The royal cabinet is delightfully situated at the entrance of the botanical garden. The Count de Buffon being exceedingly infirm, I saw this cabinet with Monsieur Daubenton, who shewed me every possible attention. From the animal kingdom, as I imagine, no collection is equal to this. In this part of natural history M. de Buffon certainly excelled. The minerals are very numerous, but much inferior to those which are in private cabinets. There are, indeed, large masses of gold and silver, but I cannot say that they appear to me well chosen.

The crystallized diamonds are fine, more valuable to the naturalist than to the jeweller.

The aqua marine crystals are very large.

The emeralds from Peru are large and clear: some are single crystals with hexaedral prisms; others form a group or drusen.

Of tin, there is one large crystal from Bohemia; but few good specimens besides.

The spathous iron, with silver, from Begori, in Dauphine, is worthy of attention.

The spathous lead ore, in fine needles, from the Hartz, is truly elegant.

Of copper, the chief and most valuable specimens are the malachites from Siberia; of which some specimens are highly polished.

The antimony, in long needles, with heavy spar, from Bohemia, is superb.

The sulphur, in large octaedral crystals, is said to be from Catalonia, but, as I apprehend, it is from Conil mine, near Cadiz.

They have here, as in all the other cabinets of Paris, large dodecaëdral garnets, uniformly incrusted with green talc, from the dutchy of Stiria. These garnets, when the crust is taken off, appear to have been formed in the talc as in its proper matrix.

I had the happiness of being noticed by M. de Romè de Lisle. A friend of his related to me a curious anecdote, which does much honour to his heart. In his youth he received a good education, and in his advancing years found all his wants supplied, without ever being able to discover to whom he was indebted, either for this bounty, or for his birth. That he might know the one, he laboured to find out the other. His first attempts were checked with a caution to forbear; and for a time he continued quiet, if not contented to remain in ignorance; but in the end, growing weary, and impatient to discover a secret, which was so diligently concealed from him, he gave way to his curiosity. Receiving no farther hints to restrain him, he grew more bold in his inquiries, till suddenly he found the stream cut off, before he had traced it to the fountain from which it flowed. Thus,

at once disappointed and deserted, he had no resource but in himself. The straitness of his circumstances brought him acquainted with Mr. Foster, who employed him in making out, from time to time, his catalogues of minerals for sale at Paris. In this employment he acquired a taste for natural history, and an intimate acquaintance with mineralogy.

After some years, the Marquis de Romè died, and by his will not only acknowledged him for his son, but left him every thing which was in his power to bequeath.

The widow of the Marquis, with her three daughters, cast themselves on the generosity of de Romè de l'Isle, who told her, " You have " been accustomed to affluence, and your daughters have been trained " up to high expectations: I have learned to live upon a little; I " shall take only a small pension for myself; you and your daughters " may enjoy the rest."

Monsieur Sage, from whom I had the chief of this relation, took an opportunity of representing this act of generosity to the present king, who has made some decent addition to his income; and he is now in affluence, loved and respected by his friends, and admired by all men of science.

The *Duke de la Rochefoucault* has two spacious apartments, beside two little chambers, filled with minerals, arranged, not according to their genera and species, but according to the countries from which they came.

The *Abbé Hauy*, of the royal academy, has a collection of crystals which is worthy of attention. He demonstrates that all crystals, of

whatever size or form, are composed of primitive, minute, and elementary crystals, and that most of them, by proper fractures, may be reduced from the complex to the simple and elementary form. In the course of my visit, I saw him with a blunt knife reduce a mishapen mass of fluor to an octaëdral crystal, nor would it readily assume any other form. This discovery he made by accident; for, observing that the angle of a fractured hexagonal prism of calcareous spar was the same as of the rhomboidal, he was led to try the other parts of the crystal. By these means he found that the whole was in lamellæ of perfect rhombs, breaking easily and only on their proper surfaces, and yielding rhomboidal crystals. He is now pursuing this discovery on the other crystallized substances, obtaining the primitive or elementary form sometimes by heating and quenching them in water, at other times by breaking the rude mass, or compound crystal, with a hammer, varying his operations according to the nature of the substance. He is deeply versed in the mathematics, of which he has availed himself in this research. The simplicity of his manners is most engaging. This discovery beautifully illustrates the ingenious observations of de Romè de l'Isle on the elementary and compound forms of crystals, and throws much light on this branch of natural history.

M. Hassenfratz carried me, in our walks, to see Stoutz, a German, distinguished for his superior knowledge in minerals and mining, who was employed on the part of the French government to visit the mines of Hungary, Bohemia, Saxony, and other parts of Germany. I found him perfectly acquainted with the nature of all mountains in which mines are formed. His collection is made upon a peculiar plan: every

specimen of mineral substances in his cabinet, is connected with others from the same mine, forming a little collection by itself; and consisting of the metal in its ore, with all the intermediate strata or changes in the rock, from the surface downwards, each with references to the various depths from which they came, and observations on the mountains in which the mineral is found. Since I left Paris, I hear that Count d'Aranda has sent him into Spain, to which country, with his superior talents, he will be a valuable acquisition.

M. Besson, Rue S. Honorè, has the most elegant and most systematical collection of minerals I ever saw, beautiful as Mr. Foster's, and classed nearly upon the same plan with the honorable M. Charles Greville's. In his collection of flints, you have the whole history of flint, from its most rude appearance to what, for beauty, we should call its most perfect species; with all the varieties, in the most natural and methodical arrangement. The same outline he pursues in all mineral and metallic substances, tracing them through all their appearances and forms, from those that are elementary to those which are most compounded, and shewing the mineral, not merely in all its matrices, but in all its combinations. In no cabinet did I ever see beauty and science so happily united. Part of this wonderful collection is not yet arranged for want of room, but chiefly for want of money to purchase cabinets. It is much to be lamented that a man of his abilities, who has discovered such zeal, such indefatigable industry, in traversing the mountains, visiting the chief mines of Europe, and exploring their contents, should be distressed and straitened in his pursuit of science. But more is it to be regretted, that a man of his

extensive knowledge should be hid, and among all the monarchs of Europe, among all the great, among all the patrons of science, should find no protector.

M. Sage is director of the mint, and principal of the royal academy for miners.

When a man of science enters the spacious hall in which the minerals are kept, if he be not altogether destitute of taste, he will be at a loss which to admire most, the building itself, or its contents. The elegant simplicity of the painted dome, the surrounding gallery with its pillars and pilasters, the whole covered with Italian stucco, the harmony and just proportion which every where prevail, and the disposition of the minerals, excite the most pleasing sensations of delight. In this beautiful apartment, with much simplicity and taste, a recess is formed for the laboratory, where M. Sage exhibits his experiments when he is delivering his lectures to his pupils. In the centre of the hall, an area is inclosed for them by a skreen, which forms his cabinet for the reception of his minerals. In his collection, his principal attention has been to science; and for that reason he has chosen specimens best suited to exhibit the metal, the matrix, its various combinations, and the acids by which it is mineralized, whether the sulphureous, the arsenical, or the phosphoric. Besides this classical collection, he has a provincial one in the gallery, where he has arranged the minerals according to the country from which they come. His method is both pleasing and improving. To complete the whole he has deposited in a cabinet by themselves the produce of all the various minerals in his collection, the result of his most accurate assays.

This inestimable treasure is designed for the use of students in the newly established academy for miners; an academy which, without distinction of nation or religious creed, is open to all the world. In this institution, as in all other establishments for extending the bounds of science, and diffusing knowledge freely and without expense among all ranks of people, we must admire the liberality of sentiment, the high spirit, and sense of dignity, which has distinguished the sovereigns of France.

M. Sage is the principal and father of this royal academy, and at the same time the chemical professor. Besides himself, there are four principal professors, whose stipend is two thousand four hundred livres each (or one hundred pounds sterling) per annum. There are five inspectors, each at three thousand livres pension, fifteen hundred for travelling expenses, and three hundred by way of gratuity, if their diligence deserves it; six engineers, at six hundred livres pension, four hundred for journies, and two hundred gratuitous; twelve scholars, at six hundred livres pension, and two hundred for gratuity. Of these, two are constantly travelling in Germany, with three thousand six hundred livres each for their expenses.

There are besides, twenty supernumeraries, or expectants, without any pension.

The inspectors and the engineers visit all the mines of France, and make a report to government, not merely of the produce, but of the management, together with such observations as they may think needful to communicate. They are likewise to be sent occasionally into foreign countries, to examine the improvements, which are made in searching

for and working mines. From this academy the mines of France will be supplied with skilful engineers and managers. All the members have a blue uniform, with M. R. on their buttons.

I was much surprised to see in most of the cabinets, and in all the printed catalogues at Paris, a substance which perhaps does not exist in nature; it is native tin. What they produce for such, appears dull and brittle, and is in fact nothing but tin returning to a calx. Whilst we smile at their credulity, we must lament that men of science should have been so easily deceived themselves, and, without intending to propagate a falsehood, should have deceived all those who have any dependance on their knowledge and veracity. For me it was by no means difficult to detect the mistake; because every specimen of this supposed native tin came from my own cabinet, and went out from thence under the denomination of dephlogisticated tin. Of this, large fragments, and even blocks, have been found in the moors, near St. Austle, but never at any considerable depth, not far distant from some old furnace or habitation, of which the tradition is, that they were, in some remote period, occupied by Jews. In the same places copper implements have been likewise found returning to a calx, some friable and red, others saturated with the basis of vital air, and therefore covered with malachites. This transmutation throws light on the red copper ore, with its octaëdral crystals found among the branchings of native copper in deep mines. The circumstances are different, but the operation of nature is the same in both.

Having viewed all the cabinets of natural history in Paris, I determined next to survey its environs.

The most striking feature in this vicinity is Montmartre, a mountain of Gypsum, at the head of the street Montmartre. The strata are horizontal. Sixteen of these have been laid open to the depth of more than one hundred and forty feet, and are seen in the following order. The soil sandy, covering chalk rubble, in which is flint. Under these, clay; fossil *shells;* crystals of selenite; gypsum rock; calcareous earth; clay; gypsum rock; clay; gypsum rock; clay; gypsum rock; marly clay; lenticular crystals of selenite, mostly in pairs, united face to face, of which the spears are only fragments; fuller's earth, perfectly free from impurities, in a stratum of about eighteen inches; gypsum rock, separated into laminæ by strata of selenitical crystals, and charged with fossil bones. The quarries and excavations are immense, to supply the numerous kilns constantly at work. The gypsum rock consists of *selenite* and *chalk*, which, being burnt, the former losing its water of crystallization, and the latter its fixed air or cretaceous acid, becomes plaister of Paris: when this is made into mortar, the selenite seizes the water, and crystallizing becomes instantly hard.

At Belmont, which is distant about half a mile from hence, the same strata have been discovered.

Before I left London, I had purchased lenticular crystals of quartz; and as this form is peculiar to the calcareous genus, I was desirous of seeing the spot from whence they came. With this view I visited the lime-stone quarries in the vicinity of Passy, where I gained the most perfect satisfaction, and saw clearly that the quartz had occupied the spaces left empty by decomposed selenite, which, as I have before observed, is calcareous earth saturated with the vitriolic acid. The lime-stone rock is

here charged with turbinæ and bivalve shells. The strata are horizontal. From these quarries they get building stone for Paris. Many of these extend more than one hundred yards under ground, with a roof supported by large pillars. Nearer to the city they sink pits about eighty feet, then drive and raise the stones by engines.

There is not the least appearance of primitive mountains in the vicinity of Paris. All has been transported, and all is horizontal.

Near Fontainbleau, they find a grit-stone, or composition of sand, with a calcareous cement. In the crystal the calx prevails, and takes the rhomboidal form, although the silicious matter appears both to the eye and to the touch to be predominant in quantity.

From the abundance of selenite in the immediate neighbourhood of Paris, the water of their wells is unfit for use.

Having heard much of Pont de Neuilly, I wished to see it. Taking advantage, therefore, of the open weather, with a bright sun, in the month of February, I took my morning walk that way, through the garden of the Thuilleries, and the Elysian Fields. From thence, there is a wide avenue of trees, with a good pavement in the middle all the way for near four miles.

This part of the country is flat, skirted by distant hills. The soil is a hungry sand, all arable; but too poor and too light for wheat, and all open *common-field*, divided, as in England, and all over Europe, excepting Ireland, in small scattered lots.

This kind of tenure, with this minute division, mark the slow progress of the plough at more ancient periods; when, from time to time, as increasing population urged them, they severed a new portion from the

common pasture, and divided it, as far as related to the tillage, among the numerous tenants of each manor. In England, the rapid progress of agriculture, in modern times, is strongly indicated by the straightness of the hedges, because all ancient bounds are crooked.

Between Paris and the Pont de Neuilly, their crops are barley, oats, and rye, for which they plough with two horses, guided with check reins, without a boy.

Within two miles of Paris, on the left hand, is the wood of Boulogne, from which the country is so plentifully stocked with game, that between that wood and Paris, in the compass of two hundred acres, I saw more than fifty brace of hares, and at least one hundred brace of partridges: a wonderful phænomenon so near to the metropolis, arising, not merely from the constitution of their government, but from the strict execution of their laws. In this we are to look for the security of person and of property in France; where at the same time few are punished, because few venture to transgress.

The Bridge of Neuilly is perfectly horizontal, and remarkable for its elegant simplicity.

On my return, I visited the Hotel Dieu, where the sick are in number two thousand five hundred and seventy-four, besides five hundred and seventy-one officers or attendants. In all, they make three thousand one hundred forty-five persons to be lodged and fed. I observed four in a bed, but they have had six or seven, and among these the dying with the dead. The sick, although so miserably provided for, cost the public thirty sols, that is, fifteen pence each per day. They have one ward in the winter, containing about four hundred persons, set apart for those

who pretend disease. The practice of stowing so many miserable creatures in one bed is to be abolished and surely upon the best of principles, for no man who reasons for a moment can hesitate to say, which is preferable, to make a few happy, or to render many completely wretched. But the misfortune is, that benevolence is often blind.

This change in the system of the Hotel Dieu has been promoted if not suggested, by M. le Necker, who, in the hospital of S. Sulpice, has set an example worthy to be followed, as reflecting the highest honour both on the understanding and humanity of that most accomplished woman. She has provided each patient with a separate bed, with the best attendance, and with every thing which can administer to his comfort. Yet all this, by a due attention to œconomy, she does for seventeen sols and six deniers each per day, being little more than half what they before cost at the Hotel Dieu.

The next day in the morning I visited the hospital called La Salpetriere, in which are maintained more than seven thousand foundling girls, with a few aged paupers, and about nine hundred prostitutes. This number is considerable, but these are only such as were guilty of other misdemeanors. On the list of the police are more than twenty-eight thousand of those abandoned and miserable women, who, in the dusk of the evening swarm in every street. In this hospital they have eight-hundred children employed in needle-work and spinning, of which number, many excel in most beautiful embroidery. When one of the old women dies, her husband leaves the hospital. The government is by a matron, fourteen priests,

thirty-two sisters of a superior order, with fifty more, who are subordinate to these.

February the 20th, I was present at a solemn service, celebrated in the church of S. Eustache, for the repose of the soul of the Duke of Orleans. The whole was conducted with the greatest magnificence and taste. The street leading to the church was lined with soldiers, horse and foot, stationed at convenient distances, besides some who were patrolling. The front of the church was covered, and all the choir was lined with black. At the bottom of the choir was a coffin raised upon a catafalque, or bier, which was about thirty feet high, twenty-four feet long, and eighteen wide, all covered either with mantles and escutcheons, or with historical pictures, and forming a well-proportioned pyramid. On the pedestal, at the four corners, were four urns, supported by columns, and filled with spirits, from which proceeded a blue and lambent flame, the kind of light best suited to the melancholy scene. This lofty catafalque had over it a canopy, which hung from the roof, about forty feet above the coffin. Over the altar was a silver crucifix, large as life, covered likewise with a rich canopy, adorned with plumes, and lighted by twenty-four large wax tapers in golden candlesticks. Guards were stationed round the supposed body to keep off the multitude; I say the supposed *body, for his body had been previously interred with the same pomp and ceremony at Vale de Grace, and his heart had been deposited in the country. The chief mourners upon this occasion were the Duke of Orleans, his son, and the Duke of Bourbon,* attended by all their nearest relations and their friends. The funeral oration

was pronounced by the Abbé Faucher, who, like all the good French writers, with their peculiar kind of eloquence, rose sometimes to the true sublime.

To the Duke of Orleans belongs the Palais royal, which is now the favourite evening walk, being equally sheltered from the sun in summer, and from the rain in winter. The dimensions of this quadrangle are nine hundred feet by three hundred and sixty; and the walk is twelve feet wide, surrounded by coffee-houses, traiteurs, and shops of every kind. The square is planted, well-gravelled, and well lighted in the evenings.

The pictures of this palace and of Versailles, with those which abound in many of the convents, have been so well described that I shall observe the strictest silence on that subject, always remembering, that I am hastening into Spain, and taking France only by the way. Such things, however, as others have not noticed, and are yet worthy of attention, I would slightly touch upon, that I may not leave too great a chasm between Calais and Belgarde.

In the evening of February 28, being the last day of the carnival, when Catholics bid adieu to festivity and mirth for forty days, all Paris was in motion, and some thousands were in masks, men in the dress of women, and women in the dress of men; all assuming characters, and many sustaining those characters with spirit. Popes, cardinals, monks, devils, courtiers, harlequins, and lawyers, all mingled in one promiscuous crowd. In the street of S. Honoré alone were assembled more than one hundred thousand souls. This street is two miles in length. With such a multitude, although more than

four hundred coaches were constantly parading on one side the street, and as many on the other, in opposite directions, such were the precautions, that no accident either happened or could happen. To preserve the most perfect order, foot soldiers were stationed at the mouth of every street where carriages could pass; and in the middle of the streets, horse-guards and infantry were constantly patrolling to keep coaches in their proper line. For this purpose they employed one hundred horse, and twelve hundred of the foot-guards.

I saw one elegant coach quietly taken into custody for some indiscretion of the coachman.

At the time of the king's marriage, they had neglected these precautions, and several hundreds lost their lives, either trampled under foot, or crushed to death.

Before I left Paris, I obtained a ticket of admission to the Licêe near the Palais royal, where a numerous society of gentlemen and ladies of the first fashion meet to hear lectures on the sciences, delivered by men of the highest rank in their profession. The sciences they cultivate are the mathematics, chemistry, natural history, experimental philosophy, anatomy, civil history, polite literature, and all the languages of Europe. Their apparatus is magnificent, and all their mathematical instruments, the best which can be procured. They have a very elegant suit of apartments, one for reading and writing, another for conversation, and a third for the lectures. The subscription is only four Louis per annum. I was much struck with the fluency and elegance of language with which the anatomical professor spoke, and not a little so with the deep attention of his auditors. The French, with all their volatility, can be grave when it is proper to be so.

After this pleasing entertainment I called to take leave of M. Hassenfratz, whom I found verifying an experiment which has been made in France, and which may be of the highest import to the bleachers of linen. This process they accomplish in twelve hours; and at the expense of a penny English they can bleach six ells of linen. For this purpose they begin with dephlogisticating a quantity of marine acid, by means of manganese, after which, having previously diluted it with water, they saturate the acid with an alkali, and thereby leave the dephlogisticated air at liberty to act on all colouring ingredients which are found in the materials to be bleached. In the same manner the green wax from America may be rendered white and fit for use. The same solution will likewise serve for a test, by which to try the durability of colours in cloth, because when they fade, it is only by the action of dephlogisticated air diffused in the atmosphere. This operation explains the effect of manganese in making glass pellucid.

Previous to my leaving Paris, I inquired the price of provisions in the market, which I found to be as follows:

Chickens and ducks, fifty-five sols each.

A small turkey, five livres.

Butcher's meat, ten sols per pound all the year.

Pork and veal, at this time, sixteen sols per pound.

Butter, thirty-six sols.

Wine in the city, twelve sols, and out of the city, eight sols per bottle.

It is the policy of the French government to make all these articles dear in Paris.

JOURNEY

FROM

PARIS TO BELGARDE.

HAVING accomplished the purpose for which I came to Paris, in obtaining letters of recommendation to Madrid, and the weather proving more favourable for travelling than it had been in the beginning of the month, on the fourteenth of March I set out with an agreeable party in the Diligence for Lyons. To those who can rise at two in the morning and have an appetite for dinner before nine, this mode of travelling is not unpleasant,

The first day we dined at Melun, and lay at Villeneuve la Guiarre. The next day passing through Sens, where the Dauphin's monument is much admired, we dined at Villeneuve la Roi, and lay at Auxerre, to which city there goes a large passage-boat from Paris, which ascending the rivers Seine and Yonne, performs its voyage in

three days, including the intermediate nights, during which it is unremittingly, yet slowly moving on. The boat is much used in summer, and, during the day, is very pleasant, passing through the richest and most beautifully varied country. The passengers carry their own beds, and spread them in a spacious cabin.

All the way from Paris to Auxerre the prevailing soil is sand, being a continuation of that vast tract of sandy country, which stretches from Dieppe by Rouen and Orleans to Bourges, yet under the sand on the hills, *chalk* appears. The fields are open, and the country abounds with corn and wine.

Auxerre is a rich city, conveniently situated for trade. The cathedral is a fine old structure, and worthy of attention. It is much to be lamented, that the chapter has never yet established an accumulating fund, to perfect what has been left unfinished of this noble edifice, and to complete the tower, which daily reproaches them for their want of zeal.

Having passed Auxerre, we lose sight of the *chalk*, and in its place, we find either a calcareous freestone, or a limestone rock, in horizontal strata; but both the limestone and the chalk abound with marine productions. The face of the country, as far as relates to soil, rock, culture, and produce, bears a strong resemblance to that between Bath and Atford, with this peculiarity, that all the hills are here upon one level, being evidently postdiluvian, formed by torrents, and intersected by deep ravines. Nature here hath not perfected her work. Neither hills nor vallies have yet assumed their proper form and character; all is confusion, ruin, devastation.

But when the heavy rains and torrents shall have sunk the ravines, widened the vallies, and, wearing away the angles from the craggy mountains, shall have reduced them to gentle declivities, or to easy swells, the rains will cease to be destructive, the raging torrents will become gentle streams, and the surface of these hills clothed with verdure, will be protected from future devastation.

When we came to Vermanton, we began to find *blocks* of *granite*, brought down by the torrents from the mountains; and, arriving at Rouvray, we saw the *granite* rock itself. From this circumstance, without having recourse to the barometer, we have reason to conclude that we have ascended to the highest level in this part of France; and, upon examination, we shall find in this vicinity the sources of many rivers, which running to the east, to the north, to the west, and to the south, empty themselves into the Seine, the Loire, and the Saone.

Not that we are to conclude from hence, that granite is the upper stratum of the earth, covering the limestone and the chalk, because the reverse of this we find to be the fact; but where chains of rugged granite mountains are seen, experience teaches us to look for nothing higher. Thus we shall find it on the most lofty summits of the Alps.

About Rouvray the soil is *decomposed granite*, of which the quartz and silicious sand remain upon the hills, whilst the clay and mica are washed into the vallies.

All here is arable inclosed. They use five horses in their ploughs.

The cathedral of Autun shews great antiquity. In ascending the

marble steps which lead to it, I was struck with the number of *gryphites* in this *blue marble* without the least vestige of any other shell.

As we had been descending a considerable time by the side of the Arroux, a little river which flows into the Loire, and were come to a much lower level, I was not surprized to meet with *marble*.

When we came within five leagues of Challon, and began to fall down towards the Saone, losing sight of the *granite*, we found only limestone, charged with *gryphites*, and covered with sand, which appeared to have been washed from a superior level.

Challon carries on much trade in corn and wine. The waters being out, we could not go down the Saone, as was intended. I was not sorry for this, because, although the country bordering on the river as you approach Lyons is most enchanting, I had seen it, and retained a lively impression of its beauty.

Between Chalon and Macon is rich, and mostly flat, but before we came to Lyons, we met with hills and *granite*, and indeed where the Saone enters the city it has made a passage for itself through the *granite* rock, which it has fretted away to the depth of about one hundred feet, leaving it on one side perpendicular like a wall.

All through Burgundy they use oxen on the road, yoked by the horns, which is certainly the best way of working them. The reason will be obvious, if we consider that by this mode of proceeding there is no strain upon any of the smaller muscles of the neck. Though the pressure be great, the vertebræ are only in the same proportion locked close into each other, precisely in the same man-

ner as are the bones of the leg and thigh of him who uses Sampson's girdle. This girdle, as it is known, a man puts round his loins, whilst he sits on a bench with his heels against any immoveable object; thus situated, and keeping his legs directly in the line of draft, he may suffer ten, or even twenty men, to pull at the girdle without moving him; but *a strong man*, who was trying this experiment, exulting in his strength, took hold of the rope which was fastened to the girdle, and thereby elevating the line of draft, and having nothing to depend upon but his muscular exertion, he was raised in a moment, and thrown upon his face. Setting aside, however, all reasoning upon this subject, the fact speaks for itself, and all who have observed the loads which two oxen on the continent will draw, must give the preference to their manner of yoking them.

The description of Lyons, as to its public edifices, I shall leave to others, and shall consider it only with regard to manufacture. Enjoying a delightful climate, and situated at the conflux of the Saone and of the Rhone, it must very soon have risen to importance. Its inhabitants have in all periods been distinguished for industry, for arts, and for love of freedom. Under the Romans, as a municipium, it possessed valuable immunities; and when it became a colony, as such it was cherished and protected. Under the sovereigns of France it has enjoyed peculiar privileges, being governed by its own magistrates, and guarded by its own militia. Four annual fairs, each of fifteen days, instituted in the reign of Lewis XI. have much contributed to the advancement of its traffic.

Its good government naturally attracted citizens, whilst the troubles excited at various periods in the neighbouring states, more especially about the year 1290, between the contending factions of the Gwelps and Gibelines, occasioned many from Italy and Florence to seek refuge in a city where they could live in security and peace.

The principal dependence, and the source of wealth to Lyons, is her manufacture of silk in all its branches.

The first who introduced this into France was Charles IX. but the chief encouragement it received was in the watchful attention of Henry IV. who in the year 1602 made a contract with some merchants, to deliver four hundred thousand mulberry-trees, five hundred pounds of seed, and the eggs of silk-worms to the amount of one hundred and twenty and five pounds, with six thousand copies of a work containing all proper directions for managing the plants, the worms, and the silk produced by them. These were to be distributed in the generalities of Paris, Tours, Orleans, and Lyons, at the rate of a hundred trees, and half an ounce of eggs to every parish. The ecclesiastics, as well regular as secular, assisted in this work, both by their precepts and example. But owing to the civil wars, by which France was distracted during two succeeding minorities, little was done effectually to animate this profitable commerce, till Lewis XIV. assumed the reins of government: from that period its advancement has been rapid.

In the year 1667 there were two thousand looms at work, but in 1768, more than eleven thousand; and such is the progress of the manufacturers, that the grower of silk is not able to keep pace with

them; for at the present time they are obliged to purchase from foreigners more than twenty millions of pounds weight to supply the market.

The silk-weavers here have almost acquired a monopoly of taste, and by this circumstance have given an example to the world of what competition can do, when properly directed.

Taste is not any where cultivated with such attention as at Lyons. The manufacturers have at times employed more than an hundred pattern-drawers, whose invention is unremittingly upon the stretch, except when they obtain leave of absence, which is sometimes granted even for twelve months, that they may rest their imagination, and acquire new ideas.

The first person noticed as having excelled in this profession was *Revel*, the friend and companion of Lebrun, an artist whose talents were so far superior to those of his successors, that they regard him as their Raphael. After him came *de la Salle*, equally famous for his birds, his landscapes, his flowers, and his fruit. *Jean Robin*, anxious that the embroiderers might copy nature, and introduce into their works from her rich variety, planted a garden in the vicinity of Paris for the cultivation of exotic plants; and thus, without having such an intention, laid the foundation of the physic garden. It was here that the celebrated Pierre Vallet, of Orleans, embroiderer to Henry IV. and Lewis XIII. acquired his fame.

Although *Lyons* has enjoyed singular advantages, she has likewise had to struggle with difficulties. These are admirably displayed by Abbé Bertholon, in a work of his upon this subject, lately given to

the public; and as every government in Europe is interested in his observations, I shall briefly state them. The various obstacles to the prosperity of trade have been and must be as long as they exist,

1. *War*, whether foreign or domestic, civil or religious; from factions in the state, or from the desire of freedom. Because commerce is frighted at the appearance of the laurel, and flourishes only whilst shaded by the peaceful olive.

2. *Persecution*, and want of toleration; as in the revocation of the edict of Nántz, operating in the same manner as the expulsion of the Moors from Spain.

3. *Laws* indiscreetly interfering, prying, meddling, restraining, vexing the manufacturer or the merchant in his operations.

4. *Taxes*, such as either directly or indirectly check the consumption. It was not till 1743, that the manufactures of Lyons were exported duty-free, and even now, all provisions entering the city pay a heavy tax, particularly wine. The consequence is, the rise of labour in the first instance, and, as the weavers on festivals resort with avidity to the neighbouring villages to indulge themselves with wine, they acquire habits of intoxication.

5. *Festivals* multipled, raising the value of the remaining days, and leading to every species of excess.

6. *Prejudices* respecting *usury*, tending to keep money out of circulation, and thereby to raise the interest on it, to the disadvantage of those who wish to borrow. In consequence of this money is at six per cent. in Lyons.

7. *Luxury* among the manufacturers, consuming their capitals, and cramping their operations.

8. *Titles of Nobility* and rank granted to merchants, under the absurd idea of promoting trade, but in truth diverting the streams by which commerce should be watered. This mistaken policy is not uncommon in the present day. How much wiser was the conduct of Louis XI! he was a friend to commerce, and cherished it by the most marked attentions, by wise regulations, and by admitting to his table, those who signalized themselves in its advancement.

A merchant named Maitre Jean, flattered with this distinction, solicited a patent of nobility; the king granted his request, but from that time never invited him to dinner. Mortified with being thus neglected, when he thought himself more worthy of attention, he ventured to expostulate, but was silenced by this reply: "Allez "M. le Gentilhomme. Quand je vous faisois asseoir a ma table, je "vous regardois comme le premier de votre condition; aujourdhui "que vous en êtes le dernier, je ferois injure aux autres, si je vous "faisois la même faveur."

The learned Abbè, to whose work I am indebted for much information recommends the white *female* mulberry as best for silkworms, and suggests an idea, that if suffered to live on the trees in the open air, yet protected from the rain, they would become more hardy, more free from diseases, and spin more perfect silk. He mentions a M. *Pernon*, who produces silk as white and beautiful as that of Nankin; and recommends for bleaching the Bengal silk, to soak it repeatedly in a mixture of spirit of wine and marine acid, in the proportion of thirty-two to one.

According to his account, no people either work longer or fare

harder than the weavers of Lyons; rising before the sun, and continuing at their looms till a late hour in the night, to procure a scanty pittance for themselves and for their children. He tells us, that no instance has been found of three successive generations who have been weavers: the first is feeble, the second is diseased, and the third never comes to maturity, unless transplanted to a soil, and engaged in some occupation more conducive to health.

Emigrations have been the consequence of these hardships; because neither laws nor chains will keep the artificer from wandering, when he is a prey to hunger and despair. (V. Commerce de Lyon, par M. l'Abbé Berthelon, &c. &c.)

In Lyons, the principal merchants and manufacturers are said to be protestants. This observation, if well-founded, is worthy of attention, and the influence of religious opinions in restraining or promoting industry and emulation, as a political question, is highly worthy of discussion; but I shall wave this for the present.

Having formerly seen every thing remarkable in Lyons, and being impatient to be gone, I watched with anxious expectation the rising and falling of the river. The day after I came to Lyons, towards noon, we began to conceive hopes that the Diligence might venture to depart.

The waters ran off with great rapidity, the river sunk apace, and soon found its proper bed; the passengers hastened to the quay, the boat took in its loading, and in less than two hours after midday, we began to float down the stream.

This vessel is very commodious for passengers, having a good deck

to walk on when the weather is agreeable, and a warm cabin, to which the more genteel passengers resort, when the atmosphere is cold or rainy.

Passing between the high mountains of Dauphinè, in a winding course, and gliding along at the rate of six miles an hour, in about five hours we arrived at Condrieux, a little village not far distant from Vienne, famous for its wine. M. David, the aubergiste, did justice by us, and credit to himself, by the specimens which he produced. He sells this wine at six louis a *piéce;* each piéce containing two hundred and fifty bottles, or one hogshead nearly. It is a sweet wine, exceedingly delicate in its flavor.

The next morning, March 21, we passed under Hermitage, where M. Larnage, the lord of Teint, annually makes about seven hundred hogsheads of the choicest wine, which M. Bourgoise, a merchant of Teint, in Dauphinè, vends on his account. The situation and the soil are certainly favourable for making wine, but its peculiar excellence depends on the choice and management of the vines, to which M. Larnage pays the most minute attention.

As we approach Valence, near which, the Isere falls into the Rhone, this river makes an angle to the right, as if diverted from its course, and being lost behind the hills, shews Valence to great advantage, seated on a rising ground, in a plain of about six miles in width.

The mountains are here calcareous. That which is west of the river, and opposite to Valence, rises perpendicularly, as if it had been cut asunder, and does not retain the smallest vestige of the

half which it has lost. The strata are horizontal; the soil in the plain is sand, but in many places it is full of pebbles to a considerable depth.

All the way as we pass between the mountains, some near to the river, others more remote, we remark, either on their summits or their sides, the ruins of ancient castles, each protecting its little village, and many of them carrying marks of the most remote antiquity.

This night we took up our quarters at Ancone, and the next morning passed by Viviers, the capital of the Vivarez. This little city is most romantic, and, from a proper point of view, would make a pleasing landscape.

At noon we passed the Pont S. Esprit, where, leaving the marquis de Gras and some other officers, in whom I had found agreeable companions all the way from Paris, I began to travel alone.

From Lyons to Avignon, which is one hundred and fifty-two miles, you pay no more than twelve livres, or ten shillings sterling, for your conveyance.

The price of provisions at S. Esprit is fixed by the magistrate. Beef, five sols; mutton, six, excepting in June and September, then seven sols per pound; labour is twenty sols a day in winter, but in the vintage, diet and ten sols, or about five pence sterling.

From Pont S. Esprit to Montpelier, which is seventy miles, I took a return coach, and, without the least difficulty, agreed with the driver for nine livres.

From the Rhone we ascended for many leagues, and observed the

limestone rock charged, yet sparingly, with small round gravel of white quartz. The country we passed through is rich, and the corn-fields are covered with mulberry-trees, vines, figs, apricots, and peaches.

As we rise towards the heights of Valigniére, we pass by Bagnols, a very ancient but wretched town, inclosed with high walls, and defended formerly by towers.

Near the summit of these mountains, we observe the craggy rocks of limestone wasted and laid bare by frost, by winds, by rain, to whose rage and violence these elevated regions are constantly exposed. Between these rocks the road meanders, presenting at every step the most enchanting views of rugged cliffs, interspersed with the ilex, the juniper, the box, the cyprus, besides thyme, lavender, and a pleasing variety of flowers. Amidst this rich profusion, I was struck however with the diminutive appearance of the cyprus and the juniper.

We lay at Valigniére, a miserable village anciently defended by a castle, the ruins of which remain to remind its inhabitants of their superior happiness, in no longer needing the protection of those walls.

In this country they have no other implements for cultivating their vineyards but such as are used in Cornwall, the biddex and the shovel, both perhaps of Celtic origin. They have a light swing plough, without coulter, fin to the share, and mould board; instead of which, they have two little wooden fins fastened into the heel of the share, one on each side, to turn the earth to the right and

left, and thus form a rafter. The beam is long, and is fastened immediately to the yoke. They plough with two oxen, yoked together by the horns, and guided by the ploughman. The soil is very light.

From Valigniére we constantly descended to the famous Pont du Garde, a Roman aqueduct which joins two high mountains. It is about one hundred and fifty feet high, and eight hundred long upon the top, but not more than five hundred at the bottom, near the water's edge. The lowest tier has six arches, the middle has eleven, but the upper one has thirty-five; the whole being of the Tuscan order, and constructed with large stones, has the air of greatness and of simplicity most happily combined. It was built for the purpose of conveying water into Nismes. To this edifice, about forty years ago, they added a bridge, much wanted over the Gardon, which is here about seventy feet wide.

At Remoulin, not far from the Pont du Garde, the limestone rock appears to be entirely composed of broken shells, united by a calcareous cement, and charged with small round gravel of white quartz, precisely the same as I had noticed in ascending from Pont S. Esprit.

March 23, at noon, I arrived at Nismes, and began immediately to feast my eyes with a view of its venerable relics. An accurate account of these may be found in a variety of books, as having been described by travellers of every nation. At the present moment, my mind contemplates an object more venerable than these monuments of Roman greatness, and my attention is wholly occupied

with the pleasing image, the image of a shepherd, who lived only for his flock: this was M. de Becdelievre, late bishop of Nismes, a prelate equally distinguished for wisdom, benevolence, and piety. Not contented with relieving from his purse the distresses of the indigent, he increased the produce of labour in his diocese, by transferring to the Sundays many of the numerous holidays which encourage only idleness and vice. In the distribution of alms, his benevolence was guided by discretion. He was a stranger to that destructive species of liberality which originates in blind sensibility, and has no other foundation but undistinguishing compassion. He consulted at once his head and heart, neither turning away his eyes from beholding misery, nor relieving it merely, and at all hazards, that he might avoid the painful sight; but, gave such assistance in the season of distress, as both reason and religion must approve; leaving the poor to feel precisely that degree of want, which, as long as they retain their freedom, will be always needful to stimulate their industry. Thus he resembled the prudent gardener, who waters the drooping plant, and continues to water it but only whilst the heavens withhold their rain. Zealous for the peculiar doctrines of his religion, he made no distinctions in his benevolence, not only tolerating, but doing good to those who could neither receive the creed, nor conform to the mode of worship established by their country. This single prelate, by his wisdom and beneficence, in the space of five and forty years much more than doubled the number of inhabitants of Nismes; for, having found only twenty thousand, he had the happiness before his death of seeing fifty thousand rise up to call him blessed.

March 24, in the evening, we got to Montpelier; and the next day, after I had delivered my letters to the Count de Perigord, governor of the province, I began to explore the country.

The first object which attracted my attention was the asparagus growing wild. These are brought to table, but they are not so sweet and agreeable as those which have received cultivation, nor are they so large.

Wandering about beyond the Perou, I stumbled upon a beaked oyster, *(ostrea rostrata)* and looking round, I soon discovered the spot where the precious relic had been deposited, when this elevated spot was under the surface of the sea. There is a regular stratum of these oysters, of about eighteen inches thickness, without the admixture of any other species, or of any other substance, extending east and west, as may be seen in every quarry which has been opened in those directions, and hiding itself under the Perou. Some of these shells are found in the superincumbent rock, and a few stragglers in the sand above it.

In the Fauxbourg Boutoné, the limestone contains the echinus, or sea urchin, and the scallop with deep ribs.

Early in the month of April, the weather being most inviting for excursions, I determined to extend my walks to some more distant objects. Of these, the only one which deserved to be noticed is a volcanic mountain, called Montferrier, described by M. Jubert. In ascending towards this, I met with a phœnomenon which frequently occurs, but which has never been accounted for. At a few yards before me, I saw a whirlwind taking up a cloud of sand,

raising it obliquely in the air, and then carrying it before the wind as far as the eye could trace it. It has been said, that the meeting of two winds, nearly in opposite directions, forms the whirlwind; and that the consequence of this, must be a vacuum in the middle, into which the air rushing with impetuosity, carries even bodies which are specifically heavier than itself. But to this solution, there appears to be more than one objection; for, in the first place, as the sand rose with a rotatory motion, it should have gone, like all other heavy bodies, not to the centre, but to the circumference. But in the next place, taking this vacuum for granted, bodies specifically heavier than air should descend, and not rise in it; unless, like the toricellian tube, it were open below, and hermetically sealed above. To account for this effect, by referring to the rise of water-spouts at sea, is only to explain one difficulty by another. When we shall know by what power in nature, a cloud, containing many thousand tons of water, is suspended in the air, we shall be, perhaps, prepared to reason with a better prospect of success upon the nature and the cause of whirlwinds.

In the way to Montferrier the rock is all calcareous; at a lower level it is pudding-stone, hard and compact, with both the charge and the cement calcareous. At a higher level, it is a calcareous concretion, or petrifaction by incrustation, light and porous, like a sponge, yet not so soft, inclosing leaves, sticks, and snails; a substance which the French call tuf. This goes to a considerable depth, and lies upon the limestone. As we approach the mountain, the pudding-stone and tuf give place to the living rock.

Montferrier is so completely covered with houses, that it would be in vain to seek a crater; but, considering its conical form, and the volcanic substances of which it is composed, I can readily conceive it to have been once a burning mountain.

In the vicinity of Montpelier, calcareous rocks, charged with marine productions, universally prevail, and are usually covered with either sand or clay. The clay being sometimes interspersed with calcareous matter and pyrites, the latter decomposes; in consequence of which, its acid uniting with the calcareous matter, forms a selenite, whilst its iron gives a colour to the marle. If no calcareous matter is at hand, the acid set at liberty forms alum with the clay.

In the Cevennes, not far from Montpelier, mines and minerals abound, some rich in copper, others in lead and iron, but few which carry tin. One of these, a lode of about three feet thick, is so poor as not to pay expenses; it produces iron, tin, and lead. In this mine, M. Chaptal, professor of chemistry, and inspector of the mines, tried an experiment, which may be highly interesting to the naturalist, if not to the adventurer in mines, by submitting to a fiery trial, many hundred-weight, if not tons, of quartz and *granite*, taken contiguous to the walls of the lode: the issue was the production of tin, lead, and iron; although no eye could distinguish the least appearance of these metals, previous to their being committed to the furnace.

From this gentleman I obtained a substance which had been lately discovered in all the auriferous streams in France; a substance

which has certainly a strong affinity to iron, yet differs essentially from it. It is in the form of sand, is attracted by the magnet, and makes Prussian blue; but it is more obstinate in the fire than platina, having never yet been fused in the strongest furnace. It is moreover, insoluble in acids without heat, gives no inflammable air, and has never yet been calcined by any acid; besides which, its specific gravity is to iron as eleven to nine. From all these properties, we may at least venture to suspect, that this newly discovered substance is a modification of iron.

To a man who is devoted to the sciences, no residence can be more delightful than Montpelier. Is he fond of chemistry? in M. Chaptal he will find a sagacious guide, well qualified to conduct him in his pursuits, and to assist him in following nature, as far as the most knowing have been able to trace her steps. The Abbé Berthelon will explain to him the principles of natural philosophy, with a clearness and elegance of expression peculiar to himself; and with an apparatus, perhaps the best in Europe, will demonstrate the truth of those principles, by well chosen and by the best conducted experiments. For botany, he can no where find a more able professor than Dr. Gouan. The lectures in every science are free for all the world; it being a maxim with the French, that Wisdom should open wide her gates, and, without distinction, receive all who wish to enter.

During my progress through the vineyards, I observed that vines are every where valued in proportion to their age. The expense attending the plantation and cultivation of a new vineyard is so

great, that upon a good soil, and in situations easy of access, corn is a more profitable produce.

The best wine was sold in this vicinity last autumn for one half-penny a quart, and wine for brandy was much cheaper. The abundance was so great, and the demand so disproportionate, that they were obliged to distil the major part of their wines for brandy. Most of this will be smuggled into England. From the port of Cette alone, last year, there went upon this trade thirty-two vessels, which, at three hundred tuns each, a tun containing two hundred and fifty-two gallons, makes upwards of two million four hundred thousand gallons; and the duty upon this, at nine shillings and sixpence a gallon, would have been one million one hundred and forty thousand pounds. All this, and much more, was lost to the revenue, by the absurd practice of laying on such heavy duties. It is much to be lamented, that the well known operation of lowering the duties upon tea, has not opened the eyes of Europe upon this subject, but more especially those of our government in England. We have indeed lowered the duty upon brandy to five shillings, yet whilst it can be purchased in France for fifteen pence a gallon, unless we sink the duty much lower than we have already sunk it, the smuggler with all his losses, will contrive to make a living profit.

Thirty gallons of wine produce five gallons of brandy; and this quantity in the vineyards last year (1785) cost only fifty sols, or about two shillings.

France is said to contain one hundred millions of acres of which

they reckon that little more than one third is in a state of cultivation; of this portion something more than fifteen hundred thousand acres are occupied by vineyards. If we allow their population to be five and twenty millions, we shall have four acres for each person.

As every thing which relates to their finance is likely to be new modelled, I need say little on that subject. Few countries stand in greater need of a reform, yet not only from the exemptions claimed by the nobles and the clergy; but from the privileges retained by many of the provinces at the time of their union to the rest, it will require either a strong hand, or most propitious circumstances, to accomplish this arduous undertaking. A nobleman of Berry told me that on one side of a rivulet which flows by his chateau, salt is sold at forty sols a bushel, and on the other at forty livres, that is, at twenty times as much; in consequence of this, no less than two thousand troops of horse and foot were stationed on its banks to check the smugglers. The farm of salt was fifty-four millions of livres.

The whole revenue being twenty-five millions sterling, each person pays twenty shillings annually to the state for its protection. If we reckon the revenue of England at fifteen millions, and the population at seven and a half, then each person will pay forty shillings. The people in France, it is true, have paid less in proportion to their numbers than the English, yet they have suffered more than in the same proportion from the tyranny, vexations, and oppression of the farmers general, to whom they have been often sold.

The price of labour, taking the average of France, may be considered as two and twenty sols, or eleven pence per day for men, and ten sols for women, employed in manufactures; yet a good weaver, working eighteen hours a day, will earn three livres ten sols for himself and boy; shearmen will get two livres a day; spinning women four livres a month, and their board, deducting holidays; carpenters and masons, twenty-four sols, and two meals a day. In husbandry, the men get in winter from ten to fourteen sols a day, with a soup at noon; but in summer, from twenty to twenty-six sols, and two meals a day. The women have half as much.

Conversing with gentlemen of the medical profession in France, I see clearly that they have not made the same advancement in the science of medicine as gentlemen who have been educated at Edinburgh. The French are fond of Boerhaave, and so devoted to Hippocrates, that I am persuaded, in the case of fevers, they often whilst looking for the crisis, lose the patient. They have almost universally a dread of the antimonial preparations; and when they venture to give the tartar emetic, it is in so small a dose as seldom to do much good. In the year 1566, the parliament of Paris forbad the use of antimony; and, although in 1624, this prohibition was reversed, the fear which had been excited and kept up for more than half a century continued to operate against this powerful medicine. Whilst in Germany and England the science has been advancing with the most rapid progress, the French physicians seem to have been creeping into day with all the timidity of doubt. One obvious reason may be assigned for this: with us the practice of

medicine leads to wealth and honor, whereas in France it leads to neither; the fees are contemptible, and, excepting in Paris, the profession is despised.

On the sixth of April I left Montpelier at five in the morning, with a volantier of Barcelona, having previously agreed with him for the use of his volantè. The common price is six livres a day, but a young traveller must not be offended if the volantier should ask twelve, and close the agreement with him at nine. In this little light machine, with one good mule, you travel eight or ten leagues a day.

From Montpelier to Pezenas is eight leagues. The soil is sandy. The rock is limestone. The fields are open, and produce corn, wine, and oil. At Pezenas are to be seen the extensive ruins of a castle, which belonged to the Montmorency family. This strong fortress was hewn out of the rock on which it stands, and appears to have been complicated and full of art. The walls are lofty, and about eight feet in thickness. The rock which is perpendicular, is a mass of shells, such as turbinæ, oysters, cockles, with a calcareous cement. From hence the circumjacent plain, decked with luxuriant verdure, and shut in by rugged mountains, affords a most delightful prospect.

The next day we dined at Beziers, a city into which the canal of Languedoc is constantly conveying the wealth which flows from agriculture. Here the corn, the wine, the brandy, the olives, and the oil of a country formerly beyond the reach of commerce, find a ready market; and from hence all that tract of country is supplied,

at a small expense of carriage, with the productions of distant nations.

Between Pezenas and Beziers, but nearer to the former, there is a stratum of brecia, of which the charge is hard blue schist, retaining the angles and the edges, yet sparingly scattered in a calcareous cement. Nearer to Beziers the limestone carries turbinæ, cockles, muscles, oysters, and scallops, deeply indented, and well defined.

In the afternoon we came early to Narbonne, having travelled eight leagues and a half this day. The leagues are of an uncertain length, some about three miles, others four.

All the way from Beziers we traverse a rich country, and corn fields, shaded with vines, olives, mulberries, and almonds, forming at every step the most enchanting views.

At Narbonne, there is a little stream, which, by the industry of the inhabitants, proves to them a more certain source of wealth than if its sands were gold.

This stream empties itself into a canal of more than half a mile in length, by the side of which they have extensive gardens, watered from it by hydraulical machines of remarkable simplicity, called *Norias.*

They consist of a vertical wheel of twenty feet diameter, on the circumference of which are fixed a number of little boxes, or square buckets, to raise the water out of a well, communicating with the canal below, and empty it in a reservoir above, placed by the side of the wheel. These buckets have a lateral orifice to receive and to discharge the water. The axis of this wheel is embraced by

four small beams, crossing each other at right angles, tapering at the extremities, and forming eight little arms. This wheel is near the centre of the horse-walk, contiguous to the vertical axis, into the top of which the horse-beam is fixed; but near the bottom, it is embraced by four little beams, forming eight arms similar to those above described, on the axis of the water-wheel. As the mule, which they use, goes round, these horizontal arms, supplying the place of cogs, take hold, each in succession, of those arms which are fixed on the axis of the water-wheel, and keep it in rotation.

This machine, than which nothing can be cheaper, throws up a great quantity of water, yet undoubtedly it has two defects: the first is, that part of the water runs out of the buckets and falls back into the well, after it has been raised nearly to the level of the reservoir; the second is, that a considerable proportion of the water to be discharged is raised higher than the reservoir, and falls into it only at the moment when the bucket is at the highest point of the circle, and ready to descend.

Both these defects might be remedied with ease, by leaving these square buckets open at one end, making them swing on a pivot fixed a little above their centre of gravity, and placing the trough of the reservoir in such a position as to stop their progress while perpendicular, make them turn upon their pivot, and so discharge their contents.

From the reservoir, the water is conveyed by channels to every part of the garden; these have divisions and subdivisions or beds, some

large, others very small, separated from each other by little channels, into which a boy with his shovel or his hoe directs the water, first into the most distant trenches, and successively to all the rest, till all the beds and trenches have been either covered or filled with water.

Nothing can surpass the luxuriance of their crops, nor the activity of those who are here engaged in the cultivation of the soil.

In this delightful walk, taking notice of some bees who were returning loaded to the hive, I recollected that Narbonne was famous for its honey, and therefore determined to taste it before I left the city. For this purpose I called at an apothecary's, who is reported to keep the best, and sell the most. His name is Dartiguelongue. The honey which he produced was delicate in its flavour, and beautifully white. This at Narbonne he sells at fifteen pence a pound, and when it is for England, he consigns it to a merchant at Cette.

The day following we travelled eleven leagues and a half, to Perpignan, the last city of any consequence in France. It is said to be well fortified, but of that I can form no judgment.

The soil all the way is sandy. The rock is calcareous, and many of the mountains are covered, even to their summits, with vast masses of limestone which have rolled.

The whole of the Rousillon is rich, and highly cultivated, even to the foot of the Pyrenees, abounding with corn, and wine, and oil, and silk, all of the best quality. The bleak and rugged mountains before us, at the distance of about three or four leagues, form a

striking contrast with the rich valley which they command. Even these are not suffered to remain uncultivated, but to a considerable height they feel the influence of increasing capitals, enriched by the growing wealth of the more fertile plain. Winding up through the gorges of the mountains, you see vines and olives flourish in every spot where industry can place them; and, wherever the plough can go, you admire the luxuriance of the corn.

The views all the way up the Pyrenees are beautiful. As you approach their summit, Belgarde presents itself, seated on a mountain eminent above the rest, and commanding this pass for a great extent. This fortress, the last in the French dominions, is more remarkable for strength than beauty.

All through the Rousillon, it is striking to see the people carrying earth in little baskets on their heads, for want of wheelbarrows. For the prevalence of this strange practice, I can assign no cause, unless it be taken from the mountains, where no better mode of conveying earth up the steep ascent can be devised. Men are every where more inclined to imitation, than to the fatigue of thinking, or of seeking for new inventions.

The ploughs they use are suited to the soil, and similar to those described already in coming up from the Rhone.

In this country you dine for two livres at the table d'Hote, and sup for forty-five sols, including bread, wine, and bed.

As you approach the borders, the officers of the doüane become more numerous, and unless well fed, most impertinent and troublesome. Notwithstanding their numbers and their vigilance, the contra-

band trade is very brisk. They reckon more than fifteen hundred smugglers in the Pyrenees; men of desperate resolution, who, knowing the cruel punishments to which they shall be condemned if taken, travel well armed, and generally in strong parties. A military force is sometimes sent against them, but to little purpose, as neither party is ever eager to engage. The smugglers, strangers to ambition, and little influenced by the thirst of military fame, without reluctance quit the field; and, unless when their superiority is manifest and great, thinking only of securing their retreat; whilst the soldier, regarding this service as both dangerous and disgraceful, has no inclination to the attack.

When these daring adventurers have the misfortune to be taken, some of them are hanged, some are broken upon the wheel, and some are burnt alive. How shocking to humanity, that governments by their bad policy should lay such snares for men! how easy would it be, by a different system of taxation, to save these lives, to avoid these cruelties, to employ in profitable labour both him who is engaged in smuggling, and those who are paid for watching him, to open a free communication with all the world, and thereby to cherish and promote the industry, the wealth, the happiness of every commercial nation upon earth. As long as the governments of Europe shall continue to foment the subsisting jealousies of trade, and, by heavy duties, to hold forth high premiums to the smuggler, each government must suffer in its proportion, each will be checked and restrained in the progress of its industry and wealth, each will abound with unprofitable subjects, and not one of them will be able

to enforce a due observation of the laws. It is much to be lamented, when light is every where diffused, and when the eyes of Europe seem open to receive it, that light should be diffused in vain, and that so little should have been done by any nation to break those fetters, which ignorance, in the dark ages of feudal anarchy, every where imposed upon commerce.

JOURNEY

FROM THE

ENTRANCE OF SPAIN TO BARCELONA.

NO one, who has not himself experienced it, can conceive the satisfaction and delight with which a traveller looks down upon a country into which, for the first time, he is about to enter. Every thing attracts his notice, and his attention is pleasingly engaged by a rich variety of forms and productions, of manners and of men, with which he had been unacquainted; and which, in proportion as he values knowledge, will at every step increase his treasure. The face of the country, the vegetable tribes, the animals, all are new, or at least have something new to him; and even those with which he is most familiar, from peculiarities for which they are indebted to the soil, or to the climate, strike him with new beauties; or,

should they have no claim to beauty, at least they have to him the charms of novelty.

Upon my first entrance into Spain, after I had cast my eyes around to catch a general view of the country immediately before me, my attention was soon taken up with a phænomenon, which at the time was new to me. In ascending the Pyrenees, after I had lost sight of the limestone, I saw nothing but schist to the very summit of these mountains; and pleased myself as I looked back upon the country which I had left behind me, to see how much it was indebted to this happy mixture of the limestone and the schist for its luxuriant crops. These rocks, elevated to the highest regions, exposed to the joint action of frost and rain, broken to shivers, and reduced to powder, driven by winds, or hurried down by torrents, the mouldering schist producing clay, the limestone its calcareous earth, and each of these contributing the sand which it contained, unite their treasures to enrich all the country below them with a never-failing supply of marl.

Thus far I met with nothing to surprise me; but, after I had passed the summit of the mountains, and having entered Spain, began descending to the south, expecting to meet more enchanting scenes, more luxuriant crops, and signs of greater wealth, the face of the country immediately before me appeared desolate and barren, without one cheerful spot in view, on which the mind could rest.

I must own I was at first inclined to attribute this dismal aspect to their want of industry, to some vice in their government, or to some error in their political œconomy; but, upon examination,

I soon discovered the real cause of this barrenness, in the hungry nature of the soil, and the want of those two inestimable feeders of vegetation, the limestone and the schist, the schist that is a species of clay slate which near the summit are seen only to the north; for the moment you begin descending to the south, the rock changes, and you find the *granite*.

This circumstance is not peculiar to the Pyrenees; it is observed on other lofty chains of mountains, and, as highly worthy of attention, may hereafter call for a particular discussion. The soil, which arises from the decomposition of granite, is not friendly to vegetation; for although it contains all the component parts of marl, yet the sand predominates, and the clay is in such small proportion, that the rains and dew contribute little to vegetation, passing quickly through the sand, or being soon evaporated, and lost in air. The proportion of these ingredients, which has been found most productive, is to have equal parts of clay and of calcareous earth, with one quarter of the whole a clean silicious sand. This proportion has been ascertained by the experiments of M. Tillet, as may be seen in the memoirs of the academy of sciences for the year 1772.

It is impossible to pass the Pyrenees without admiring the wisdom of the treaty, A. D. 1660, to which they have given name, as having fixed the most natural of all boundaries, the ocean alone excepted, between two great commercial nations. There was a period when rivers made the most obvious limits of an empire; but in a state of civilization, these change their nature, and are considered by all nations as the most valuable parts of their possessions.

Whereas the summits of mountains, as abounding with passes easy of defence, form a strong barrier against a powerful neighbour, and a barrier which is naturally determinated by the parting of the waters; and these summits being little susceptible of cultivation, leave a convenient space between the profitable possessions of the two adjoining nations.

The only useful productions of these high mountains are the ilex, and the cork tree; the latter very profitable on account of its bark.

When these are fifteen years old, they begin to be productive; yet not for the market, this maiden bark being only fit for fuel. At the end of eight years more, the bark improves, but does not arrive at its perfection, till the third period; after which, for one hundred and fifty years, it yields a marketable commodity every ten years. The season for barking is in July or August, when they take special care not to wound the inner bark.

From Perpignan to Junquera, a village of six hundred and twenty-seven souls, and the first you meet with after you enter Spain, is seven leagues, or four French posts.

Here the inns begin to exhibit their wretchedness. No bedsteads but only three boards laid upon trestles to support a mattress; no bed curtains; no glass in the windows.

It is curious to see the peasants exercise their skill in drinking, without touching the mouth of the bottle with their lips; and the height from which they let the liquid fall in one continued stream, without either missing their aim, or spilling a single drop, is most

surprising. For this purpose, the orifice of the spout is small, and from their infancy they learn to swallow with their mouths wide open.

On the tenth of April, early in the morning, we left Junquera, passing for a considerable way by the side of a rivulet, which in winter is a raging torrent. The soil, as might be well expected, is hungry sand. The cultivated land is covered with vines, with olives, and with rye; the uncultivated abounds in cork trees. At the feet of the Pyrenees we find an extensive valley, every where shut in by mountains, excepting only a small opening to the sea, which is near Castillon de Empurias, in the Bay of Roses. In this extensive plain, or rather bason, which, as we look down upon it, seems flat and level, are many hills, some rising bold, some gently swelling, and covered with various kinds of soil, but chiefly with decomposed granite, which from local circumstances, has acquired more than its due proportion of clay, and thereby rendered the barren quartz exceedingly productive.

From Junquera we have three leagues to Figueras, a town of four thousand six hundred and forty souls, where the Spaniards are now erecting a fortress, supposed to be impregnable: of its strength I am not qualified to judge; but for beauty I cannot conceive any thing to go beyond it. It contains quarters for one hundred and fifty companies of infantry, with five hundred horse; apartments for sixty officers, each with a kitchen, a dining room, and two spacious bed rooms; one long range of magazines for provisions, and four for powder; all upon a great scale, and highly finished.

These works are made bomb proof. To supply the garrison with water, there is a capacious reservoir under the parade, formed in the quarry, from whence was taken all the stone for these extensive buildings. The glacis, in most part of the fortification, is formed of the living rock, and the whole is protected by proper bastions. It is said, twelve thousand men will be sufficient to defend these works. At present there is a hill which commands the fort, but this, the patient and persevering industry of Spaniards will certainly remove, or at least reduce below the level of their works.

It would be difficult to ascertain how much labour has been lost in the establishment of this strong hold; but we may venture to affirm, on the authority of those who are competent to judge, that had the same sums been expended in the cultivation of the soil, in the establishment of farms, in making canals, and mending roads, to invite strangers into Spain, instead of building fortifications to keep them out, the face of the whole country had been changed, not merely in point of beauty, but of strength. The folly of all offensive wars begins to be understood in Europe, but *more especially in France;* and as for defensive war, the resistance of America, by its successful issue, and that of Corsica, which, although not successful, cost the French five times more than the value of the conquest, prove that a country tolerably strong in itself, and well defended by its inhabitants, needs no fortification to repel invaders.

Extensive fortifications cost immense sums to erect, and so much to keep them in repair, that they are commonly suffered to decay. Every such fortress requires an army to defend it, and when the

moment of trial comes, the whole may depend on the weakness or treachery of a commander, and, instead of being a defence to the country, may afford a lodgment to the enemy. If an able man happens to command, admitting the country to be both well peopled and well governed, may not more be expected from him in the field than in the fortress? The most obstinate resistance the Romans met with was from a city that had no *walls*. In a discourse of Baron Hertzberg not long since published, we may see what was the opinion of the late king of Prussia on this subject; for, whilst he expended trifling sums on his fortifications, he was at a vast expense in promoting agriculture and manufactures in his dominions; having in the space of a few years, built five hundred and thirty nine villages, and established in them forty-two thousand six hundred and nine families, on the banks of the Oder, the Havel, and the Elbe; besides three thousand families on the Netz and Warthe.

Fortifications are only needful for the maintenance of usurped dominion, or to protect the borders of a kingdom from the incursions of a barbarous nation, whose object is to plunder.

The price of provisions at Figueras is remarkable; beef and bread are each about three halfpence sterling per pound, troy weight, but mutton is nine-pence. The reason of this disparity is, that they plough with oxen, and have few sheep.

Between this town and the Col de Oriol, the rock, wherever it appears, is limestone.

From Figueras to Gerona is seven leagues. About half way between these places, we pass over a high mountain, called la Cuesta

Regia; in ascending which we find a base of pudding stone, whose charge is shingle of smooth, rounded, silicious gravel, with a calcareous cement; the top and all the middle region is schist; but in descending near the bottom, the same pudding stone appears again; from which I conclude this kind of rock pervades the mountain, and forms its base. This phænomenon is worthy of attention, and deserves a more minute investigation and description than a hasty traveller can bestow upon it.

The situation of Gerona is delightful, on a declivity, looking to the S. W. and fed by a rich well watered valley, which is open to the meridian sun, but bounded to the North and to the East, and sheltered by high mountains. The whole city seems to be built of the pudding stone.

The soil is sand and clay, productive of all kinds of grain; such as beans, peas, lupines, wheat, and barley, with saintfoin and clover. This land they either dig with tridents or three pronged forks, and till with oxen and such ploughs as I have before described, with this difference, that they have only one handle, and instead of pins, they have two iron wings fixed to the share, extending beyond the heel, to supply in some measure the place of mould-boards.

All the way to Mataro, the soil, and even the sand of the sea shore, is nothing but the quartz and mica of *decomposed granite*, which, when not robbed of its clay, is made productive.

Nothing is more common than to jump at a conclusion; but if, without subjecting myself to such a charge, I might venture to hazard a conjecture, I should be inclined to think, that wherever

vitrescent sand appears, whether on the sea shore, or on calcareous mountains, it comes from granite.

After having travelled four leagues and a half from Gerona, we arrived at Granotta, where we stopped to dine. Within three leagues and a half of Calella, the face of the country changes; for here, leaving the valley, we ascend once more the mountains, which, as I expected are *granite*. This variety is pleasing, for, although they are scarcely susceptible of cultivation, except for vines, nature has by no means neglected them, but with more than common liberality has clothed them with perpetual verdure, and given them in great abundance the elegant arbutus, with a rich variety of flowering shrubs and aromatic herbs.

Having past these ever fragrant mountains, we descend again into a valley, which is protected from the encroachments of the sea by lofty cliffs. In this valley we cross a river, which shews the nature of the country through which it flows; for although at present it contains little water, and may be forded without danger, yet, after hasty showers, it rages with ungovernable fury, and carries every thing before it. The valley being flat, and the soil, to a considerable depth sharp sand, without any natural cohesion, the torrents, unconfined by banks, have widened their channel to the extent of near a quarter of a mile. This sand is evidently derived from *granite*, freed perfectly from clay by constant washing.

Having passed the river, not far distant from its mouth we ascended a hill, from whose summit we looked down upon a sea coast, where all nature wears a smiling aspect. Throughout the

whole tract of country we left behind us, the vines had not begun to bud, and the birds were silent on the mountains; but here the vines shewed long branches with blossoms and young fruit, whilst the birds seem to vie with each other, which should charm the ear with most delightful melody. The little hills were covered with vines and olives, and the sea seemed all alive with fishing boats. From this delightful spot numerous villages appear as far as the eye can reach.

In one of these, *Calella*, which, according to the genius of the Spanish language, is pronounced Callelia, we took up our lodging for the night. It has eight hundred and eighty-six souls, and employs near fifty fishing boats.

The next morning, when we set forward on our journey, about five, I was not little struck to see children, with old men and women, each carrying a little basket, watching, precisely as in the south of France, for the dung of mules and horses which were passing by. This practice whilst it implies poverty of soil, evidently proves that for industry at least they deserve highly to be praised.

The conduct of farmers in the west of England is the reverse of this. Their dependence for manure being wholly on sand and weeds, the produce of the ocean, they neglect the more obvious source of plenty to be derived from cattle. They set a proper value upon what the Catalans despise; but, in return, these are careful to collect the treasure which the others suffer to be lost; whereas the true wisdom would be to avail themselves of both.

In going from Calella to Mataro, four leagues, the way is wholly by the sea side; the first part of it over *granite rocks*, the latter on the beach.

Mataro, a flourishing sea-port of nine thousand six hundred and seventy-nine souls, has, for its loyalty and attachment to the present family, been made a city. Here are three convents for men, and two for women, with one general hospital. It gives employment to nineteen looms, sixteen stocking frames, makes much lace, prints linens for America, and is distinguished for the excellence of its red wine. Scarcely one idle person is to be seen. It is however to be lamented, that so much of their labour should be lost by those who are engaged in weaving ribbons, instead of making many at the same time, all their looms are single. If this proceeds from ignorance, government should take care to have them better taught; if it is the effect of prejudice, they should be allured by premiums to become greater œconomists of time.

All through Catalonia you admire, at every step, the industry of the inhabitants, who, working early and late, give fertility to a soil, which naturally, except for vines, is most unproductive; but when you come to Mataro, you are perfectly enchanted: the farms are so many gardens, divided every where into beds of about four feet wide, with a channel for the passage of the water to each bed. Every farm has its Noria, a species of chain pump, which from its extreme simplicity, seems to have been the invention of the most remote antiquity. By means of this machine, they every morning draw a sufficient quantity of water from the well for the

service of the day, and in the evening distribute it to every quarter, according to the nature of their crops. The reservoirs into which they raise the water, are about twenty, thirty, or even forty feet square, and three feet high above the surface of the ground, with a stone cope on the wall, declining to the water, for the women to wash and beat their clothes upon. The soil is so light, being nothing but sand from the *decomposition of the granite*, that they plough with two oxen or one horse, or even with a mule; yet, by the assistance of the water, it is made fertile, and produces on the same spot of ground, corn, wine, oranges, and olives. The Agave, or the American aloe is here planted as a fence.

When we drew near to Barcelona, we had to cross a river, in which we counted fifty felons, clothed in green, and employed in clearing the channel, whilst centinels stationed at convenient distances prevented their escape.

It is curious to observe this mark of contempt for the Moors, in clothing their vilest criminals, and even their hangman, in green, the sacred colour of Mahometans, more especially in Africa.

All the way from Montpelier to Belgarde, the road is wide, and kept in excellent repair; but from the entrance into Spain, to within about two leagues of Barcelona, nothing seems to have been done since the foundation of the world, either to expedite the progress of a traveller, or even to secure his safety, should he have occasion to pass this way. Although to an Englishman these roads must appear detestable, yet if we look back thirty or forty years, to the time when most of our provincial roads were in the same

condition, and reflect how much has been done within that period, we may hope that the industry of Catalans will not overlook an object of so great importance; and that our children who visit those delightful regions, will pass through them with less hazard and more comfort than their fathers did before them.

The vernal sun, south of the Pyrenees, is reviving to the traveller; but the season of Lent has one circumstance attending it, which, in a Catholic country, is not perfectly agreeable, nor indeed conducive to his health: for, during these forty days of abstinence, he must learn to live on fish and vegetables; because, although in Spain they have now four days in the week, in which, by special indulgence, they may eat flesh, few people are inclined to use this privilege.

The accommodations, if not in Lent, are more than tolerable, and cheaper than either in England or in France. You pay for a volanté, with a good mule, attended by a guide, five shillings a day, without further charge; fifteen pence for dinner, without any limitation in quantity of wine; twenty-pence for supper and your bed; and, in the morning two pence for chocolate. These being the regular and stated prices, leave no room for disputing with the landlord, as the most patient are sometimes obliged to do in France.

In all this country, oxen draw heavy loads on the highway, and move with spirit.

BARCELONA.

In this journey I made the greater speed, in order to spend the holy week at Barcelona; and I have no reason to repent the pains I took to be present at their solemnities. No citizens, perhaps, bestow so much expense, and no magistrates can pay more attention, than the citizens and magistrates of Barcelona, in the processions of the holy week.

On Wednesday, the 12th of April, I arrived, and the next morning early I visited the churches, to see the preparations they had made for the entertainment of the evening, in which they were to represent the last sufferings of the Redeemer. In every church I found two images, as large as life, distinguished from the rest as being stationary, and the more immediate objects of their devotion; the one representing Christ as taken from the cross, the other, the virgin in all her best attire, pierced by seven swords, and leaning over the recumbent body of her son. Behind these images, a theatre with colonades, supporting a multitude of wax tapers, dazzled the sight, whilst the ear was charmed by the harmonious chaunting of the choir.

More than a hundred thousand persons all the morning crowded the streets, hurrying from church to church, to express the warmth of their zeal, and the fervor of their devotion, by bowing themselves in each, and kissing the feet of the most revered image. Most of

the spectators were natives of the city, but many upon such occasions resort to Barcelona from the adjacent villages, and some from distant provinces.

Towards the close of day the pageant appeared, moving with slow and solemn pace along the streets, and conducted with the most perfect regularity. The last supper of Christ with his disciples, the treachery of Judas, attended by the priests, together with the guards, the flagellation, the crucifixion, the taking from the cross, the anointing of the body, and the burial, with every transaction of the closing scene, and the events subsequent to the passion of our Lord, were represented by images large as life, placed in proper order on lofty stages, many of which were elegant, and all as highly ornamented as carving and gilding, rich silks, brocades, and velvets, with curious embroidery, all executed by their most skilful artists, could render them. No expense was spared either in the materials, the workmanship, or the wax lights, which, with the most splendid profusion, were consumed upon this occasion. Each of these stages was supported on the shoulders of six men, who were completely hid by a covering of black velvet hanging round the margin of the stage, and reaching nearly to the ground. This procession was preceded by Roman centurions clothed in their proper armour, and the soldiers of the garrison brought up the rear. The intermediate space was occupied by the groups of images above described, attended by eight hundred burgesses, clothed in black buckram, with flowing trains, each carrying a flambeau in his hand. Besides these, one hundred and four-score penitents engaged my more particular attention.

Like the former, they carried each a flambeau, but their dress was singular, somewhat resembling that of the blue-coat boys of Christ's hospital in London, being a jacket and coat in one, reaching to their heels, made of dark brown shalloon, with a bonnet on their head, like what is called a fool's cap, being a cone covering the head and face completely, and having holes for the eyes. The design of this peculiar form is to conceal the penitents, and to spare their blushes. These were followed by twenty others, who, either from remorse of conscience, or having been guilty of more atrocious crimes, or for hire, or with the most benevolent intention of adding to the common fund of merit for the service of the church, walked in the procession bare footed, dragging heavy chains, and bearing large crosses on their shoulders. Their penance was severe; but, for their comfort, they had assigned to them the post of honour; for immediately after them followed the sacred corpse placed in a glass coffin, and attended by twenty-five priests, dressed in their richest robes. Near the body, a well chosen band with hautboys, clarionets, French horns, and flutes, played the softest and most solemn music. This part of the procession wanted nothing to heighten the effect. I am persuaded that every one who had a soul for harmony felt the starting tear.

In the processions of the present day, practices which had crept in when chivalry prevailed, with all its wild conceits, practices inconsistent with sound morals, and offensive to humanity, are no longer to be seen. The civil magistrate, interposing his authority, has forbidden, under the severest penalties, abominations which, as the genuine offspring of vice, could not have ventured to appear, even

in the darkest ages, unless in the disguise and under the sanction of religion. The adulterer, if he will court the affections of his mistress, is no longer permitted publicly to avow his passion, to scourge himself in her presence, and by the severity of his sufferings to excite her pity, must now seek the shade, and if he feels himself inclined to use the discipline, it must be where no human eye can see him. In these ages of superior knowledge and refinement, men look back with wonder at the strangely inconsistent conduct of their progenitors, when, ignorant of every thing but arms, they embraced and carried with them a religion whose influence they never felt, and the purity of whose precepts they did not understand. It was not in Spain only that superstition reared her throne, all Europe acknowledged her dominion, and in every nation in which the victorious banner of the Goths and Vandals was displayed, we have seen execrable vices cherished in the same breast which appeared to glow with fervid zeal for the glory of God, at least as far as could be testified by the most strict attention to the ceremonials of religion. All Europe is emerging from this state of Gothic ignorance, and Spain, although the last, it is to be hoped will not be the least enlightened.

When the pageant was over, the people retired quietly to their habitations, and although more than a hundred thousand persons had been assembled to view this spectacle, no accident of any kind was heard of. The day following, before eight in the morning, another procession of the same kind, but more elegant than the former, was conducted through the streets, and in the evening, a third, at which

assisted all the nobles of Barcelona, each attended by two servants, and, in rotation, carrying a crucifix large as the life, and so heavy, that no one for any length of time could sustain the weight of it. The stages and images were not the same which had been exhibited the preceding day, but represented all the same events. Every stage was completely occupied by images large as life, and surrounded by a border of open carved work superbly gilt; and the bearers, as in former instances, were hid by curtains of black velvet, richly embroidered. Two hundred penitents in grey attended as before. In each of these processions were many children, some not more than three years old, carrying little crosses, with each a flambeau in his hand. These are used in all processions, even in the middle of the day.

The different stages, with their groups or figures, belong to different bodies corporate, either of the nobles or artificers, and are ranged in the processions according to their right of precedency. These groups are called the mystery of the corporation. That of the French artificers is an Ecce Homo, but for some reason the consul walks before it, attended only by the meanest subjects of his nation.

The succeeding day, at nine o'clock in the morning, when, as being Saturday, I had no expectation of such an event, the Resurrection was announced, by bells ringing, drums beating, cannons firing, people shouting, colours flying, and, in a moment, all the signs of mourning were succeeded by tokens of the most frantic joy.

The processions were intermitted for several years, prohibited by government, on account of abuses which had crept into them, and, in their place, the carnival was substituted, with the same licentious riot and confusion as I have described in Paris, and as all who have passed the carnival in Italy have seen. But after the inhabitants of Barcelona, in the year 1774, had resisted the demands of government, requiring them to draft every fifth man for the army, like the other cities and provinces of Spain, the carnival was forbid, and the trade, which had been always brisk at this season, felt a loss, which made the citizens call loudly for the restoration of their processions.

After Easter they have one on a smaller scale; about seventy priests, each with a lighted flambeau in his hand, preceded by a herald with his banner, carry the host, under a canopy of crimson velvet, to those who had not been well enough to receive it in the churches.

The streets of Barcelona are narrow and crooked, like those of all ancient cities. The old Roman town may still be distinctly traced, occupying a small eminence in the centre of the present city, with one of its gates and some of its towers, well preserved. In this are many sarcophagi, altars, images, and inscriptions, with a temple of Neptune, all which have been well described by antiquarians. It was here that Ferdinand and Isabella received Columbus, returning from America, and from hence that navigator sailed on his second expedition, in the year 1493.

In visiting the churches of Barcelona, an observation is confirmed, which had occurred even in the most contemptible of the country villages, south of the Pyrenees. It is evident, that all their decorations were invented about the beginning of the sixteenth century, after the gold and silver of America had been brought to Spain, and every altar piece, with every column, shews that their improvement in taste did not keep pace with their increase of wealth. Riches came upon them by surprise, and found them unprepared to make a proper use of the abundant treasure. Hence even the Composite and the Corinthian pillars are loaded with new ornaments, and whether fluted or contorted, they are entwined by ivy or by vines, and are almost hid by the multitude of angels fluttering round them, or by cherubs climbing up the branches; and the whole of this preposterous assemblage is covered with one glare of gold. The present generation is enlightened, and their taste is much refined; yet they want resolution to reform abuses, and to strip off those ornaments, to which the blind zeal and devotion of their forefathers have given sanction. One of their best writers has remonstrated, and his remonstrances have engaged the attention of government to make wise regulations for the future.

They have in this city an academy for the noble arts, open to all the world, in which all who attend, are freely taught drawing, architecture, and sculpture, under the direction of D. Pedro Moles, and others, who, like him, excel in the branches they profess. For this purpose, they have seven spacious halls, furnished at the king's expense with tables, benches, lights, paper, pencils, drawings,

models, clay, and living subjects; they assemble in the morning from ten to twelve, and in the evening from six to eight, in winter, and from eight to ten in summer.

This academy is well attended; I counted one night upwards of five hundred boys, many of whom were finishing designs, which shewed either superior genius or more than common application. It is not to be imagined that all these boys, or perhaps any of them, are destined to be painters: this was not the intention of government, much less of Count Campomanes, who suggested the institution. Most, if not all these youths, are apprenticed to trades; and it is well imagined, that every other art may receive some assistance from this, whose peculiar property it is to excel in imitation: such an institution is much wanted in England. Not only the sculptor, the architect, and the engineer, but the coach-maker, the cabinet-maker, the weaver, nay even the taylor and the haberdasher, may derive great advantages from that accuracy of sight, and that fertility of invention, which are acquired by the practice of drawing and designing.

D. Pedro Moles is an artist whose works have been universally admired for the beauty of his stroke, and the force of his expression. It is a pity that the graver was ever taken from his hand: he may, perhaps, be more usefully employed in superintending this academy, but, as an engraver, he would have acquired a more lasting fame, and have made a better provision for his family.

One of the seven halls is fitted up as a nautical school, and is provided with every thing which is needful to teach the art of

navigation. The students, who at present are only thirty-six, assemble every morning from eight to ten, and every evening from three to five. Since the first establishment of this useful seminary, they have sent out more than five hundred pilots, qualified to navigate a vessel to any quarter of the globe.

Equally well furnished with the preceding, and equally well conducted is the military academy, in which there are three magnificent apartments for the students to pursue their studies, from the first elements of the mathematics, to the higher branches of their profession.

Besides these institutions for the instruction of such as are devoted to arts or arms, there are not wanting some of more general utility, accessible to all the citizens without distinction. These are a cabinet of natural history, and the public libraries, of which there are four; three general, and the other confined to medicine and surgery; the cabinet belongs to D. Jaime Salvador. From the reports of this collection, I had formed high expectations, but I must confess myself dissatisfied. Some thirty or forty years ago, it may have been worthy of attention, but the science itself, and the cabinets of the curious, are so much improved, that collections, which at remoter periods excited wonder, are in the present day justly regarded with cold indifference. The general libraries are those of the bishop's college, of the Carmelites, and of the Dominicans. This last I found most worthy of attention, as containing more modern books of value, than either of the former. Among these, some of the most considerable were the Ruins of Palmira; Raphael's Heads, by

Fidanza; Duhalde's China; Monumens de la Greece; Histoire généalogique de la Maison Royale de France, & des anciens Barons, par le P. Anselme; antichita di Ercolano; Muratori Thesaur. vet. Inscriptionum; Numismata Vir. illust. ex Barbadica gente; Danubius Pannonico Mysicus. These may serve to shew that the collection is not contemptible. In short, whatever studies a man may be desirous of pursuing, he will find in one or other of these libraries the best books, to which he may have access six hours every day, excepting holidays. In the convent of the Dominicans there is one apartment filled entirely with books prohibited by the inquisition, and, in order that no one may be tempted to peruse them, all the vacant spaces are filled with devils cracking human bones, it is to be supposed of heretics. Lest, however, this sight should not suffice to check a prying disposition, they are well secured by lock and key, and no one has access to these without a special licence.

In the cloister of the Dominicans there are more than five hundred records of sentences passed on heretics, containing their name, their age, their occupation, their place of abode, the time when they were condemned, and the event; whether the party were burnt in person or in effigy, or whether he recanted and was saved, not from the fire and the faggot, for then he might relapse, but from the flames of hell. Most of these were women. The first date is A. D. 1489, and the last, 1726. Under each inscription there is a portrait of the heretic, some half, others more than three parts, devoured by devils. I was so much struck with the fantastic forms which the painters had given to their dæmons and the strange attitudes of the heretics,

that I could not resist my inclination to copy some of them when no one was walking in the cloister. Some time after this, sitting with one of the inquisitors, who did me the honour of a visit, he in a careless manner took up my memorandum book, and as chance would have it, opened precisely on the leaf which contained my drawings: I laughed; he coloured; but not one word escaped from either at the time. Fifteen months after this, when I returned to Barcelona, he smiled, and said, "You see that I can keep a secret, and that we are not strangers to principles of honour."

During my residence at Barcelona, I had an opportunity of seeing all the courts of the inquisition assembled in a grand procession to celebrate the feast of S. Pedro Martyr, their patron saint, in the church of St. Catharine of the Dominicans. Happy had it been for Christendom if all their festivals had been as innocent as this. It is, however, universally acknowledged, for the credit of the corps at Barcelona, that all its members are men of worth, and most of them distinguished for humanity.

Visiting the churches at all hours, whenever any service was performed, I made a party with some friends to hear a penitential service in the convent of St. Felipe Neri, on Friday evening of April 28. The first part of the Miserere was no sooner ended than the doors were shut, the lights were extinguished, and we remained in perfect darkness. At this moment, when the eye could no longer find an object to distract the mind, the attention was awakened by the voice of harmony, for the whole congregation joined in the Miserere, which they sung with pleasing solemnity; at first with soft and

plaintive notes; but having laid bare their backs, and prepared them for the scourge, they all began nearly at the same instant to use the discipline, raising their voices, and quickening the time, increasing by degrees both in velocity and violence, scourging themselves with greater vehemence as they proceeded, and singing louder and harsher, till at the end of twenty minutes, all distinction of sound was lost, and the whole ended in one deep groan. Prepared as I had been to expect something terrible, yet this so far surpassed my expectation that my blood ran cold; and one of the company, not remarkable for sensibility of nerves, being thus taken by surprize, burst into tears.

This discipline is repeated every Friday in the year, oftener in Lent, and is their daily practice during the holy week. I was not at liberty to ask what advantage they derived, or what benefits they expected to receive from this severity; yet, from the prevalence of vice in Spain, I fear this practice has little if any tendency to reform their morals.

The hospicio, or house of industry for the poor, next attracted my attention. This institution originated in the year 1582, much about the time when the poor began to occupy the serious attention of all the governments in Europe. With the house of industry is united the hospital of mercy, which, in the year 1699, was put under the care of the nuns of St. Francis, called Monjas Terciarias de S. Francisco. The whole was reformed in 1772. In this establishment they provide for children of parents who are burthened with a numerous offspring, for beggars, and for other objects of distress. In the year

1784, they had 1466 paupers; the year following 1383; and, when I was there in 1785, the number was 1460, the average being fourteen hundred and thirty-six. Of this number, about one thousand are able to work, three hundred are idiots, and the rest are little children. The whole expense for them is about forty-eight thousand two hundred livres Catalan, or about five thousand one hundred and sixty-four pounds sterling per annum. The king allows for each pauper, fourteen maravedis per day to purchase a ration of bread. These are equal to one penny sterling, or nearly so. The voluntary contribution amounts to about fifteen thousand livres Catalan, and the deficiency is made up by the bishop. The women and children are employed in knitting, spinning, and in making lace. The men card, comb, spin, and weave cotton, flax, and wool. The produce of their labour is contemptible, being at the rate only of one penny each per day, should we allow, which cannot be allowed in Spain, three hundred working days, and one thousand paupers fit to be employed. Yet this produce is greater in proportion than the average of our work-houses in England. Although no paupers can be either better clad, better fed, better attended, or better lodged, or can meet with greater tenderness when they are ill, they cannot readily forget their loss of liberty. All these comforts, therefore, are despised when compared with freedom, and few, besides the most decrepit, would remain within those walls if they could be permitted to beg their bread from door to door. This principle, however, is productive of much good; for most of the young men in Barcelona, of any worth or spirit, form themselves into clubs for mutual relief, in the same

manner, and nearly upon the plan adopted by our friendly societies, in England. These fraternities have each its firm, taken from the name of the Saint to whose protection it is recommended. They are upon the most respectable footing, and being well conducted, leave none but the most improvident and most worthless subjects to be disgraced by confinement among fools and madmen. Those who are able to work, but choose rather to live in idleness and vice, are left to the correction of the laws.

There is one house of correction, which is too remarkable to be passed over in silence. It embraces two objects; the first is the reformation of prostitutes and female thieves; the second, the correction of women, who fail in their obligation to their husbands, and of those who either neglect or disgrace their families. The house for these purposes being divided into distinct portions, without any communication between them, the one is called *real casa de galera* and the other *real casa de correccion.* For each of those, who are shut up in the former, the king allows seven deniers to purchase eighteen ounces of bread, and nine deniers, which is nearly one penny sterling, to procure meat. The fund for this arises from fines; but to aid this fund, the women are obliged to work as long as they can see. By their labour they earn about five shillings a month, half of which they have for themselves, whilst, of the other half, the alcadye or governor has one-tenth to stimulate his attention to his duty. These women, working thus from light to light, would earn much more, were it not for the multitude of holidays. The ladies, who deserve more severe cor-

85378

rection, than their husbands, fathers, or other relatives can properly administer, are confined by the magistrates, for a term proportioned to their offences, in this *royal* mansion, or casa *real* de correccion. The relation, at whose suit they are taken into custody, pays three sueldos, or four-pence halfpenny per day, for their maintenance; and with this scanty provision they must be contented. Here they are compelled to work, and the produce of their labour is deposited for them, till the time of their confinement is expired. The whole of the building will contain five hundred women; but at present, there are only one hundred and thirteen. Among these are some ladies of condition, who are supposed to be visiting some distant friends. Here they receive bodily correction, when it is judged necessary for their reformation. This establishment is under the direction and government of the *regente de la audiencia*, assisted by the two senior criminal judges, with the alcayde and his attendants. One of these judges conducted me through the several apartments, and from him I received my information. Among other particulars, he told me, that they had then under discipline, a lady of fashion, accused of drunkenness, and of being imprudent in her conduct. As she was a widow, the party accusing was her brother-in-law, the marquis of ——.

The judges of this court are universally acknowledged to be men of probity, and worthy of the high degree of confidence thus placed in them. One of them, Don Francisco de Zamora, to whom I am indebted for the most polite attentions, is a gentleman of indefatigable application, and of universal knowledge.

The *audiencia* mentioned above, although a modern institution,

bears some resemblance to the courts of Westminster-Hall, and a still greater to the parliaments in France, having the administration of justice, civil and criminal, committed to it, with the government, both œconomical and political, of the whole province, like the ancient courts of all the feodal sovereigns. The captain-general and governor of Catalonia is president of the audiencia, with a vote. This tribunal, which is supreme, and receives appeals, is divided into three courts, one criminal, the other two civil, and when united into one, œconomical.

In each of these are five judges. The kings of Arragon, and after them the sovereigns of the united empire of Castile and Arragon, were accustomed to appoint viceroys of Catalonia, till Philip V. in the year 1716, changed the government of this province, established the audiencia, and appointed his captain-general to preside in it.

Besides these general courts, there is one established for commerce, which is again subdivided; of the subdivisions, one being judicial, determines differences between the merchants; the other has the government of all arts and manufactures.

The whole city of Barcelona is divided into five districts or wards, over each of which, presides one of the five alcaldes del crimen, or judges of the criminal court of the *audiencia*, with his *promotor*, *escrivano*, *alguacil*, *portero*, and *alcaldès de barrio*, to determine, in the first instance, all causes both civil and criminal between the inhabitants, and to preserve the peace in their several wards. The *alcades* de barrio, of which each ward chooses annually eight, re-

sembles our constables. But besides, these two *alcaldes mayores* are conservators of the peace, and justices for the city at large.

The government of Barcelona, as far as relates to political œconomy, is committed to a court of twenty-four *regidores*, *nobles*, or aldermen, four deputies from the commons, with authority to vote, and two syndics, the one called procurador, and the other personero. This court is subordinate to the *acuerdo*, or œconomical court, which is composed of the two civil courts, assisted by the regente de la real audiencia, and presided over by the captain-general of the province.

There are three colleges of escrivanos; the first are called *escrivanos publicos*, or *escrivanos de numero*, who are scriveners to make contracts and wills. The second are *escrivanos reales de la audiencia*, who are present in court to authenticate all transactions there; but who may, by special license, make contracts also: of each of these, the number is limited to forty. The third are improperly called escrivanos, being *procuradores*, that is, proctors, solicitors, attornies, or counsel, to solicit and to plead all causes in the courts of justice. In Catalan, these are distinguished by the name of *notarios reales causidicos*, and although by law they are limited to thirty, it is impossible to confine them to that number, because of the multitude of causes, which they have to plead. There are at present seventy-three of these, besides one hundred and ninety-nine advocates.

The multitude of causes does not arise in Catalonia, as in Wales, from any violence of temper, or litigious spirit in the inhabitants,

but from the uncertainty of its laws. They have a peculiar code, called, Constitutions of Catalonia; but this being inadequate to their wants, the next in force is the canon law; and, where that is silent, there ultimate resort is to the Justinian code.

The process is by written evidence, and the only parties visible in court are the judges and the pleaders, with the *relatores*, or readers of that evidence authenticated by the escrivano, in whose presence it was taken. For the assistance of the poor there is appointed a procurador, and also an abogado; the one to solicit, the other to plead their causes.

No hospital that I have seen upon the continent, is so well administered as the general hospital of this city. It is peculiar in its attention to convalescents, for whom a separate habitation is provided, that after they are dismissed from the sick wards, as cured of their diseases, they may have time to recruit their strength, before they turn out to endure their accustomed hardships, and to get their bread by labour. Nothing can be more useful, nothing more humane, than this appendage. The numbers they received into this hospital were, in the year 1785, nine thousand two hundred and ninety-nine; and in 1786, six thousand four hundred and eighty-eight. In the former year, they buried eight hundred and fifty-four; in the latter, nine hundred and twenty-six; which, upon the average, is nearly a ninth of those who enter; but then it must be considered, that many are put into public hospitals merely to save the expense of funerals.

With this hospital is united, under the same administration, an establishment for foundlings, sufficiently capacious for the city and

its environs. The deserted children, were five hundred and twenty-eight, on the average of the two last years, and of these two-thirds were buried; a proportion shocking to humanity, but the inevitable consequence of taking infants from the mother, and crowding them together in a city; more especially if, as in Barcelona, five children hang upon one nurse. It is much to be lamented, that they have not, like the French, recourse to the milk of goats; or, like the children in the Orphan Hospital in Dublin, learnt to use sucking bottles.

The boys on this foundation are bound apprentice when of a proper age; the girls when marriageable, are conducted in procession through the streets, and any young man who sees one whom he would choose for a wife is at liberty to mark her, which he does by throwing his handkerchief.

Besides these charitable foundations, there is in Barcelona an Orphan Hospital which I did not visit.

The inns are little inferior to those of the great towns in France. The table is well served, and supplied with plenty of good wine. The whole expense for lodging and board is only five livres French, or four shillings and two-pence sterling per day.

Barcelona may be considered as divided either into districts or into parishes; the former being five, the latter eight, including the cathedral. In a circumference of four miles it contains at present ten thousand two hundred and sixty-seven houses, and twenty thousand one hundred and twenty-eight families, consisting of ninety-four thousand eight hundred and eighty persons.

The thriving condition of this city will appear by exhibiting at one view the state of its population at different periods.

A. D.	1464, the number of persons was - - - -	40,000
	1657, - - - - - - - - - -	64,000
	1715, - - - - - - - - - -	37,000
	1759, in 13,917 families, - - - - -	69,585
	1778, in 16,608 ditto - - - - - -	84,870
	1786, in 20,128, ditto, - - - - -	94,880

The falling off, in 1715, may be readily accounted for, by recollecting, that during the war of the succession, Barcelona was besieged, three times, and taken twice, first by the English, then by the French. In these convulsions the migration was great, and the assassinations were innumerable.

If the returns which have been made to government are compared with the parochial returns of births and burials, we shall be inclined to suspect some inaccuracy in either one or both, unless we take into consideration the number of priests, soldiers, monks, and nuns, which make these proportions differ from those which have been found in other countries. The births, on the average of the two years, 1785 and 1786, were three thousand nine hundred and sixty-six; the burials four thousand one hundred and ninety-eight; the deaths exceeding annually the births by two hundred and thirty-one. This circumstance is not uncommon in great cities; but if we multiply the births by twenty-six, and the burials by thirty-six, and take the average between them, we shall have one hundred and twenty-seven thousand and ninety-seven, which is thirty-two thou-

sand two hundred and seventeen, beyond the returns to government. It must be confessed, that the people have an interest to conceal their numbers, in order to lessen their contribution. This being the case, perhaps we should come nearer to the truth, if we should suppose the population of Barcelona comprehending only those who are settled in a family way, at more than a hundred thousand souls. I shall however only state them according to the government returns.

Settled in families	94,880
Secular priests, and servants of the church	912
In 19 convents of monks	1,212
In 18 convents of nuns, and 3 of beatas	654
In the general hospital, with foundlings	2,597
In the work-houses	1,438
In prisons, and house of correction	337
In sanctuary at the cathedral, at present only	8
In garrison, and military academy	5,628
Officers of justice, and inquisitors	147
Clergy of St. Philip and others	157
Strangers on board of ships, and in the inns, &c.	3,440
Total numbers in Barcelona	111,410

This account of the population of Barcelona I have from D. Francisco de Zamora, and it is confirmed by the captain-general; yet both acknowledge, that to obtain precision is almost impossible; and neither of them could give me the numbers confined in the prisons of the inquisition.

The wealth which flows into Barcelona is not confined within its walls, but helps to increase the population of all the surrounding villages, which, in the compass of five leagues, are one hundred and five, all subject to its jurisdiction, and all partaking of that tranquillity which arises from energy in a well constituted government.

The industry which every where appears in Catalonia, seems to act with concentrated energy in Barcelona. Early and late, not only is the hammer heard upon the anvil, but every artist is seen busily employed, each in his several way adding to the general stock.

Two considerable trades in Barcelona are the taylors and the shoemakers, who are employed in clothing the army, not only in Spain, but over the whole empire. It is curious to observe, that as Scotland is remarkable for breeding gardeners, Ireland chairmen, Switzerland soldiers, so Catalonia is distinguished all over Spain for shoemakers and taylors

Amongst the more considerable trades, are the silk-weavers, cutlers, armourers and braziers, carpenters, cabinet-makers, turners, with fringe-makers and embroiderers. I was particularly struck with the gun-smiths, who appear not only numerous and diligent, but uncommonly dexterous in the handling of their tools. The turners are more than dexterous, making one foot upon occasion, serve the office of a hand to guide the tool, or to fix the poppet-head. The carpenters work in a manner peculiar to this city. They have neither pit saw, hand saw, carpenter's adze, axe, nor hatchet: to slit a plank, they fix it in a vice, and use a spring saw strained

by a bow, for working which they require two men. At this we need not wonder much; yet, when we see two men employed with the same tool, that is with a tool of the same form, but finer, to make either dove-tail joints for cabinets, or tenons for doors and sashes, we must be allowed to smile. If they wish to smooth a board, they let it incline upon two wooden tressels, and hew it across the grain with a coopers adze, not reflecting that an elastic body cannot resist the stroke. It is by no means necessary, that a mechanic should be able to explain the laws of motion, but what philosophers acquire by study he should learn by observation, and with him experience should supply the place of instinct, and supersede the use of abstract reasoning.

The chocolate grinders have a method of working peculiar to Spain, and much preferable to that which is used in England. Our grinders depending altogether on muscular exertion, use only the muscles of one arm, and employ those muscles to the greatest disadvantage; whereas in Barcelona, the slab, instead of being flat and horizontal, is curved, forming the segment of a hollow cylinder, and is inclined to the horizon. The operator kneeling behind this and leaning over it, with a granite roller, which is something longer than the slab is wide, grinds the chocolate, using both his hands, and pressing it with the weight of his body, as well as by the exertion of his arms. This operator goes from house to house, because most families choose to have their chocolate ground at home. For the market they have a more expeditious method, and grind the chocolate much finer than it can be made by hands. For this purpose, five rollers of polished steel, fixed

in a frame, and appearing like the spokes of a wheel, or the radii of a circle, yet each turning round upon its axis, are placed between two mill-stones, of which, one is immovable, whilst the other, with the rollers receives motion by communication, in common with two other mills of the same construction, from a cog-wheel below stairs, which is turned in the usual method by a mule. The nuts fall through hoppers to feed the mills. In this manner, one man will grind three hundred weight of chocolate every day.

The manufacturers of silk, cotton, and wool, adopt all the modern improvements. It is now about a twelve-month since M. Pontet brought to them from France a model of a machine for spinning cotton better than it can be spun by the hand, something like that which was invented by Mr. Arkwright. As this machine is well known in England, I shall not describe it. They have here a company, established by charter, for spinning American cotton, to supply the manufactures which use to take annually from Malta, spun cotton to the amount of two hundred thousand dollars, or about thirty thousand pounds sterling. This company enjoys many and valuable privileges. They have fourteen of the Manchester machines at work. As the cotton comes over foul, and full of sand, they are obliged to prepare it, before they can begin to work. This they do in a simple machine constructed for the purpose. They have a large lanthorn cylinder made with pantile laths, leaving half an inch between lath and lath. This cylinder is inclined to the plane of the horizon, and is immovable. Within this, they leave a portion of a cone, approaching in its form to the containing cylinder, turning on their common

axis, and furnished with iron spikes of about five inches in length, placed in a spiral line, to correspond with similar spikes fixed within the cylinder, in order to tease and to cleanse the cotton. The person who turns this machine with one hand, feeds it with the other. Government, which is disposed to give every possible encouragement to this branch of manufacture, has granted to the Marquis de Gobert, exclusive privileges for his blanket manufacture at Vicq, as a reward for his having planted cotton in the island of Ivica, and has offered premiums to those who spin the greatest length of thread from one ounce of cotton. For printing cottons, they have the same slow process, which was practised in England, with stamps, previous to the use of cylinders.

The manufacture which gave me the greatest pleasure was one of woollen, carried on by Don Vincente Vernis. He employs three hundred and fifty persons, in making cloth for Spanish America, which indeed takes most of the Barcelona goods, except some silk smuggled with their brandy, through Guernsey into England. He has a very compact and elegant machine, for winding and twisting worsted, in which four-score reels are managed by one little girl, whilst another gives motion to the whole, and at the same time employs herself at knitting. This child sitting on a bench, treads a vertical wheel, which, by means of a wheel with cogs, fixed on the other end of the same axis, moves the horizontal wheel, and thereby turns the spindles. When one of the girls is weary, the other takes her place.

The manufactures have increased with such rapidity, that the wa-

ges of labour for all kinds of artists, in the city and the environs have advanced to two pistreens, or one shilling and eight-pence a day, for which they work only seven hours. The common labourer will earn fourteen pence in winter, but in harvest twenty. These gains, however, are not out of proportion to the value of provisions, as regulated by the magistrate. Mutton is sold for ten-pence the pound of thirty-six ounces, beef for seven-pence, and bread at present for seven farthings the pound of twelve ounces; lodging for a small family costs about two guineas a year.

The mechanics here allow, that to maintain a family with tolerable comfort, their gains must be one hundred livres Catalan for each, which is nearly eleven pounds sterling.

As fuel is not easily procured, they use the utmost frugality in dressing their little dinners, seldom indulging themselves with either roast or boiled meat, but mostly stewing it in pitchers over their fogon or little furnace.

Nothing can more distinctly mark the character of this people and the rigid parsimony, which accompanies the industry of Catalans, than a trade by which many contrive to obtain a maintenance for themselves and for their families. This occupation is to make fogons, which they do for less than a penny sterling each. Their manner of constructing them is somewhat singular. They take any bottomless pot, without inquiring for what use or purpose this pot has been before employed. They line it within, and cover the outside with well-tempered clay, then putting three iron bars in the bottom, and three knobs by way of feet, with three more to support an olla or

puchero, the whole is finished; and in this behold the poor man's kitchen. The puchero is simply an earthen pitcher, in which the meat is stewed, and hence the common invitation to dinner, even in the houses of wealthy citizens, is to partake of their puchero, or, as we say, to take pot luck.

The foundery for brass cannon is magnificent, and worthy of inspection. It is impossible any where to see either finer metal, or work executed in a neater and more perfect manner. Their method of boring was invented by Maritz, a Swiss. Near two hundred, twenty-four pounders, are finished every year, beside mortars and field-pieces.

The stationers in Barcelona have a method of ruling books for merchants, than which nothing can be either more simple, expeditious, or exact. For this purpose they have a frame with bars, moveable in grooves, which are readily fixed at the distances required.

In every country a traveller can pass through, he will find some mechanical contrivances, some modes of expediting work, which are of late invention, or at least new to him; and I am inclined to think, that no country, if thoroughly examined, would furnish more than Spain. This however, I conclude, not only from those transient observations, which I have had opportunities of making, but from those of a most excellent mechanic, general Betancourt, a Spaniard, who has sought out ingenious artists in their garrets all over Europe, and who, I am persuaded, not from national prejudice, but from intimate knowledge and conviction, places his own countrymen among the foremost in fertility of imagination and mechanical invention.

The inspection of their gun-locks gave me peculiar satisfaction. In those which are made in England, the tumbler, unless case-hardened, is apt to wear, and to go off upon the half cock; and even when executed in the most perfect manner, how many accidents have happened in going through a hedge; but in the Spanish gun-lock, the tumbler, if I may be allowed to call it such, being of a different construction, is free from these imperfections. I shall not here attempt any verbal description of this excellent piece of mechanism, but hereafter I may, perhaps, engrave my drawings, and give them to the public.

The commerce of Barcelona is considerable, notwithstanding the many impediments, natural and political, which have checked, and still continue to restrain its progress. This city has no navigable river, and seems to have been built in its present situation, only for the sake of deriving protection from the high mountain which commands it. The basin is formed by a mole, and is sufficiently capacious, but there is only twelve feet water on the bar. The quay is well constructed, but merchants are not permitted to land their goods immediately on it, lest the boatmen should want employment. All ships which are permitted to prattique, even though they should be forced in by storms, pay a duty, which is called *Lluda;* and, should they be obliged to land the cargo, on reshipping, they have oppressive duties to discharge.

The province is indebted to Count Campomanes for the removal of the worst impediment to manufacturers that ever was invented by the blind avarice of sovereigns, at once to seize a revenue and to cut

off the source from which it should arise. Although abolished, the *Bolla*, deserves to be recorded for the honour of the king, who, from principles worthy to be adopted by all the governments in Europe, had the wisdom to revoke it. Previous to the abolition of this vexatious tax, the weaver could not begin a piece of cloth without sending for the administrator of the bolla to affix his leaden mark, and when he had finished it, he was to do the same. When disposed of, it was necessary to have another leaden seal, attended with a certificate; after which, when sold by retail, the portion cut off was to be sealed with wax, and the end of the piece, from whence this small quantity had been taken, was to be sealed again with lead. The tax was fifteen per cent.

We wonder at the strange absurdity of this imposition; but, let our own government reflect, that the sovereigns of Catalonia had not the monopoly of folly. Spain may with good reason say to England,

> Cum tua pervideas oculis mala lippus inunctis,
> Cur in amicorum vitiis tam cernis acutum.
>
> Hor. Sat. Lib. i. Sat. 3.

Brandy, wine, nuts, almonds, raisins, and cork, are shipped at different places on the coast for the merchants who reside in Barcelona. The wines are Mataro, Villanova, Sitges, Valls, and Granatché. The price varies according to the season, but when it is highest we may reckon Mataro at sixteen dollars, or forty-eight shillings the hogshead, including the Spanish duties; Villanova, fifteen dollars;

Granatché, forty. All these are red. The following white wines, are, Sitges, fifty-four; Valls, twenty dollars; but the common price is twelve dollars and a half per hogshead, for both the Mataro and Villanova.

When brandy is dearest, it is sold, duty free, on board, at 57 dollars, or £8. 11*s.* the four cargas, or pipe of 124 gallons English, Hollands proof, or 1*s.* 4*d.* per gallon; but it is sometimes sold at 10*d.* Of late, considerable quantities of brandy have been embarked at Barcelona, where they may be deposited from the neighbouring country, without being liable to the heavy municipal duties levied at the gates of the city, on provisions of every kind, and from the imposition of which, brandy is much dearer in Barcelona than in Guernsey.

Besides the articles above enumerated, the merchants export wrought silks, printed cottons, woollen goods, small arms, and specie; this last is contraband. Catalonia furnishes thirty-five thousand pipes of brandy, and two thousand of wine, besides thirty thousand bags of nuts, containing three bushels each, at twenty shillings the bag. Of the above, about four thousand pipes of brandy, and some silk, go to Guernsey and Alderney, and the rest to France, all to be smuggled into England.

The cork bark, which makes a principal export of this province, was for a time prohibited, under the idle notion that the inhabitants might manufacture it at home; not reflecting, that the English cutters, who are the principal consumers, could get a supply of cork in Portugal and France.

The imports are corn, fish, woollen goods, hardware, and oil of vitriol. The articles prohibited are beer, cyder, lead, hose, haberdashery, muslins, and cottons; but of the two last, immense quantities are smuggled in.

Wine entering the city, pays a town-duty of fifty reals per carga of twenty-eight gallons. Wheat and barley, entering by sea, pay, if for the public bake-house, one and a half per cent; if on a Spanish merchant's account, three per cent; and if on account of alien merchants, four and a half per cent. This duty was recovered formerly for the bishop; but at present the king takes part of it on his own account.

Cloth pays from one hundred twenty-seven to three hundred fifty-seven maravedis the vara.

Leather pays eighteen maravedis per pound. Hardware, from thirty to fifty per cent. and fish, from thirty to seventy per cent. on the prime cost. Wine exported pays five per cent. if on foreign bottoms, but if on Spanish, it is free. Nuts pay three sols, eight deniers, per sack; of these, twenty thousand are for the English market.

About one thousand vessels enter the port of Barcelona yearly, and of these, one half are Spanish, one hundred English, one hundred and twenty French, and sixty are Danes.

The confidence of Catalans on the intercession of the saints, has at all periods been a source of consolation to them, but upon some occasions, has betrayed them into mischief. Every company of artisans, and every ship which sails, is under the immediate protection of some patron. Besides folio volumes, which testify the numberless miracles performed by our lady of Montserrat, every subordinate shrine

is loaded with votive tablets. Were this persuasion of the kindness and power of departed saints, productive only of gratitude and hope, it were cruelty to rob them of their treasure; but, unhappily, it has been the parent of presumption; and among the merchants, has brought many wealthy families to want. The companies of insurance in the last war, having each of them its favorite saint, such as San Ramon de Penaforte, la Virgen de la Merced, and others, associated in form by the articles of partnership, and named in every policy of insurance, and having, with the most scrupulous exactness, allotted to them their correspondent dividend, the same as to any other partner, they concluded, that with such powerful associates, it was not possible for them to suffer loss. Under this persuasion, they ventured about the year 1779, to insure the French West Indiamen at fifty per cent. when the English and the Dutch had refused to do it at any premium, and indeed, when most of the ships were already in the English ports. By this fatal stroke, all the insuring companies, except two, were ruined; yet, notwithstanding such misfortunes this superstition remains in force.

In Catalonia as in France, with which this province was formerly connected, accounts are kept in *livres, sols, and deniers; twelve* deniers make a sol, and twenty sols a *livre. Thus far all is plain* and easy, but when we are to reckon by the money of this province, nominal and real, nothing can be more perplexing. If we reckon the peso or current dollar at three shillings sterling, the hard dollar will be four, the current pistole, twelve; and the pistole of gold, fifteen shillings.

But for greater perspicuity, I shall reduce them to a table, reminding the reader, that in proportion as the exchange varies, additions or subtractions must be made.

CURRENT COINS OF BARCELONA.

Maravedi, of which 4 make a quarto, 18 a sol.
Half Quarto of 2 Maravedis.
Quarto of 4 Maravedis, worth ¼ of a penny sterling.
Double Quarto, worth ½ of a penny.
The above are of copper. Those which follow are of silver.

Denomination.	Value in Quartos.	Value in Sols. Deniers.	Value sterling. £. s. d.
Quarter Pistreen - - -	8½ ——	1 10½ ——	0 0 2$\frac{23}{28}$
Half Pistreen - - - -	17 ——	3 9 ——	0 0 4$\frac{23}{28}$
Pistreen - - - - - -	34 ——	7 6 ——	0 0 9$\frac{9}{14}$
Quarter Pillar ditto - -	10½ ——	2 4 ——	0 0 3
Half Pillar ditto - - -	21 ——	4 8 ——	0 0 6
Pillar Pistreen - - -	42 ——	9 4 ——	0 1 0
Double Pistreen - - -	68 ——	15 0 ——	0 1 7$\frac{1}{7}$
Peso Duro, Hard Dollar - - -	170 ——	37 6 ——	0 4 0$\frac{3}{14}$

THE GOLD COINS ARE,

	Pistreens.	Sol.	Den.		Liv.	Sol.	Den.		£.	s.	d.
Durillo, worth	5	0	0	—	1	19	10	—	0	4	$3\frac{3}{16}$
Half Doblon, new	10	0	0	—	3	15	0	—	0	8	$0\frac{7}{8}$
Doblon, ditto	20	0	0	—	7	10	0	—	0	16	$0\frac{7}{8}$
Double Doblon	40	0	0	—	15	0	0	—	1	12	$1\frac{7}{8}$
Doblon de a Ocho	80	0	0	—	30	0	0	—	3	4	$3\frac{3}{4}$
Half Doblon, old	10	0	3	—	3	15	3	—	0	8	$0\frac{3}{4}$
Doblon, old	20	0	6	—	7	10	6	—	0	16	$1\frac{1}{2}$
Double Doblon, ditto	40	1	1	—	15	1	0	—	1	12	3
Doblon de a Ocho, ditto	80	2	6	—	30	2	0	—	3	4	6

The Pistreen being reckoned at 4 reals vellon, of $8\frac{1}{4}$ Quarts each all over Spain, except in Catalonia, where 4 Reals vellon are valued at only 7 sols $5\frac{1}{4}$ deniers. Pistreens brought from Spain into Catalonia, gain $\frac{3}{8}$ per cent.

THE IMAGINARY MONEY OF CATALONIA.

	Deniers.		£	s.	d.
Sol	12	0	0	0	$1\frac{7}{8}$
	Sols.				
Livre	20	0	0	2	$1\frac{1}{4}$
Real ardite	2	0	0	0	$2\frac{1}{4}$
Peso, cur. Dollar	28	0	0	3	0
Ducat	38	$7\frac{1}{17}$	0	4	$1\frac{13}{17}$
	Dollars				
Current Pistole	4, or 112		0	12	0
Pistole of gold	5, or 140		0	15	0

Eight Deniers are equal to 3 Quartz, Spanish money.

To reduce Pesos into Livres, multiply by seven, and divide by five; or add $\frac{2}{5}$ of the Pesos.

To reduce Livres into Pesos, multiply by five, and divide by seven.

MEASURES IN CATALONIA.

Twelve Cortans make one Quartera, which is two bushels, English measure.

Sixteen Cortans make a Carga of wine or brandy, which is about thirty Gallons English.

WEIGHTS.

Twelve ounces make a pound.

Twenty-six Pounds one Arroba.

Four Arrobas one Quintal, which is ninety-three Pounds English.

One hundred and twenty-five Pounds, make one hundred and twelve Pounds English.

The building of Barcelona, according to historians, was about two hundred and thirty years prior to the christian era, and three hundred subsequent to the first establishment of the Carthaginians in Spain. It is said, to have been called Barkino by its founder, in honour of his family, and to have derived from the Jews the commercial spirit which it has constantly retained.

It has seen many revolutions, and suffered much by every change. It was early delivered from the dominion of the Moors, (A.D, 805.) and

raised into a county, paying homage to the kings of France, till they unable to protect it, resigned their claims, (A. D. 874.) leaving the citizens to their own exertions for the vindication of their freedom. From this time their struggles, for more than a century, were incessant with the Moors; (A. D. 994.) but, in the end, the crescent yielded to the cross, and for many generations Barcelona was independent on its neighbours. Towards the close of the twelfth century it was annexed, by the marriage of its count, to the crown of Arragon; and, at a subsequent period, by the union of Ferdinand and Isabella, it became part of the Spanish monarchy.

Whilst the succession was disputed between the two houses of Austria and Bourbon, on the death of Charles II. of Spain, (A. D. 1700.) this city was of too much importance to the contending powers to remain long in the quiet possession of either. The French were masters of the city when the earl of Peterborough arrived upon the coast with his little army, a force too inconsiderable to attempt a siege with any prospect of success. But as this gallant officer had that, which supplies the want of more numerous armies, an imagination fertile in resources, his friends never gave up their hopes of success, till they saw him reembark his troops, and prepare for sailing. The moment of despair to them was to the besieged the reviving of their confidence, and his departure the signal of festivity, to those who had never been free from apprehensions whilst he remained before the city. He sailed; but in the night he disembarked his troops, and before the morning, he got possession of Monjuich; and after a few days more he was master of the city. In this arduous undertaking he was well supported by Brigadier Stanhope,

and Mr. Methuen, whose prudence, fidelity, and valour procured for them those honours which they have transmitted to their families.

Gerona, Tarragona, Tortosa, and Lerida, followed the example of the capital, and declared for Charles. Wherever the earl of Peterborough turned his arms, victory declared for him; it was sufficient for him to shew himself, and every city offered him its keys. Whilst he was in Valencia, the enemy laid siege to Barcelona; but he hastened to its relief, and compelled them to retire, not only from before the city, but out of the province, (May 1, 1706,) although he had only a few troops, and they had thirty thousand men. When he was superseded, a series of misfortunes too well known hastened the fall of the arch-duke's dominions; and the citizens of Barcelona, after an obstinate resistance, opening their gates to Philip, submitted, though reluctantly, to bear the yoke.

A spacious and airy walk round the walls, with the inclosed gardens, contribute towards making Barcelona one of the most delightful cities in the world. No one, who has been there in the spring, will be ever weary of expatiating on the pleasures he enjoyed.

It is situated in a plain, open to the south east, but protected from the west by Monjuich, and from the north by a chain of mountains which are terminated to the west by Mont S. Pedro Martyr. The soil, from six to ten feet deep, is clay.

In this plain, near to the city, is a little stream, which, in summer, serves for watering the country; but to the westward, beyond Monjuich, is the Lobregat, the largest river between the Ter, which runs by Gerona, and the Segre, which, rising in the Pyrenees, empties itself into the Ebro.

One of the mountains, opposite to the city, called S. Jeronimo, is famous for its convent and for its gardens, which are spacious, shady, and well-watered. At the bottom of the hill is a quarry, in which the stone evidently contains much calcareous matter. Higher up is *granite*, of a loose texture, crumbling and decomposing, whilst the middle and the top to the south, and hanging to the sea, is altogether schist; but beyond the summit, descending to the north, there is only *granite*. We must always remember, that in the natural situation, the granite is covered by schist, and the schist by calcareous rock. From this elevated spot Montserrat appears magnificent, and seems to be within two hours walk. The prospect every way is pleasing and extensive.

On the sides of this mountain they have quarries of limestone and marble.

My distant excursions were reserved for holidays, when the consul was at leisure to go with me. In one of these we visited Mont S. Pedro Martyr, from which you command a more extensive prospect than from S. Jeronimo. To the north of this stands Montserrat, and beyond it the Pyrenees appear sinking in the horizon, and looking only like a wall of snow. Turning to the south and to the east, we see the whole extent of the rich vale which supplies the city, and the numerous adjacent villages; and beyond this, the Mediterranean, bounding the distant view. To the westward flows the Lobregat, descending through the gorges of the mountains, from which it receives innumerable torrents, and having spent its fury, moves on slowly to the sea, winding its meandering course through the extended plain which itself has formed.

The base and body of this mountain is *granite*, but as you rise towards the summit, you find the proper covering of schist breaking into thin white flakes, and, with the vitriolic acid, forming allum. It is evidently from the dissolution of the schist, which every where abounds on the tops of these high mountains, that the subjacent plain is covered to so great a depth with clay, not merely with such as the brick-makers prefer, obstinate and sterile, but such as, by the mixture of calcareous matter and of sand, approaching to a marl, is easily broken by the plough, and bears the most luxuriant crops.

These mountains are cultivated, and where the plough cannot go, even to their summits, they are covered with vines.

Here, for the first time in Spain, I found the *quercus coccifera*, which bears the kermes; but on these no traces of that little animal appear.

We dined at a country house belonging to the Dominicans, to which those fathers go when they wish to breathe a purer air, or to retire for a season, from the restraints of the monastic order. Here they have a hall of near sixty feet, many good bed-rooms, and a gallery of ninety feet in length, by eighteen wide, open to the east and to the south, commanding at once the plain, the mountains, and the sea, with the city, some villages, a few convents, and numberless farm-houses scattered in the valley. Above and below them, on the declivities, are stretched their vineyards, furnishing them with raisins and excellent wine. They received us with hospitality, and had we been inclined to stay, they would have given us beds. Here we remained until the setting sun reminded us that we must mount our horses and return.

I have seldom quitted any spot with more regret; and had I not soon after left Barcelona, I should have chosen this for my retreat, in which, with the assistance of a father, I might have learnt the Spanish language.

Having surveyed these elevated regions, which bound the prospect to the north, I was desirous of investigating with more minute attention the nature of Monjuich, which hanging over the sea, commands the city to the west. For this purpose I walked upon the beach, clambered on the cliffs among the rocks, and either on horseback or on foot I crossed its summit in all directions, that I might examine it in every part. The base and body of this mountain is sand, stone or silicious grit, of a fine grain, and either white, red, or grey with some little sprinkling of mica. The summit, in some places, does not differ from the base, but in others it is covered with pudding-stone, with schist, with clay, or with fuller's earth; and, which is most worthy of attention, both the schist and the clay carry fossil shells.

If I might venture to hazard a conjecture, supported by these facts, and by others similar to these, I should be much inclined to think, that this whole mountain is a deposit, and that the grit is only the decomposed granite, either of those mountains, of which I have given the description, and which is of three species, white, red, and grey, or else of some other mountains, which exist no more.

This subject will be resumed, when I come to treat of the environs of Salamanca; and I hope that the hypothesis here delivered, will then not only be confirmed, but help to throw a light upon some parts of natural history, which are now obscure.

If my conjecture be well founded, Monjuich must not merely have been covered with the sea, and this fact is, beyond a doubt, but it must have been relatively lower, and much lower, than the granite mountains by whose spoils it was composed, being accumulated at the conflux of two or more currents, as we see in miniature in torrents, or at the junction of two streams. Whoever is well acquainted with the external appearance, and with the internal structure, of the country near Southampton, will see a striking example of this accumulation, not from matter brought by either of its rivers, for their beds are too low for such an operation, but by the action of currents, when the surrounding hills of Sussex, Wiltshire, Dorsetshire, and the Isle of Wight, were under the surface of the sea, as we must conclude from the fossil shells found in the chalk on every one of these hills.

From Monjuich we look down on the extensive plain formed by the Lobregat, which appears fertile, but by no means inviting, because every thing in it has a gloomy aspect, and the inhabitants have all the tokens either of agues, of dropsy, or of jaundice.

The fortifications on this mountain are reckoned perfect in their kind; they are highly finished, and for beauty do credit to the nation. These, in addition to the strong works round the city, and the citadel, must render Barcelona untenable by an enemy.

The appellation of Monjuich has never been properly explained. They anciently wrote Monjouy, but the pronunciation is Monjuiqu, which may possibly mean mountain of the Jews. Certain it is, that the Jews were numerous in this part of Spain, and that on the hill

looking towards the city, there are monumental inscriptions on large hewn rocks in Hebrew characters; many of the words are scarcely legible, but by those which can be read, that spot appears to have been the burying place of the jews.

The country around Barcelona is well cultivated, and abounds with vines, figs, olives, oranges, silk, flax, hemp, algaroba fruit, wheat, barley, oats, rye, beans, peas, vetches, Indian corn, millet, with all kinds of lettuce, cabbages, cauliflowers, and other vegetables for the service of the kitchen.

To plough their land they use only two oxen, or one strong mule, and no boy to drive. Their plough is light, and well contrived: the beam is long, and fixed to the yoke, if they have two oxen; or if they use one mule, they fix it to the collar by shafts; for stirring they use no coulter, fin, nor mould-board, but in its stead two ears for breaking up their land; and when the soil is stiff, they drop the ears, and take coulter, fin, and mould-board, which they put on or off in three minutes time. They have two methods of setting the plough up or down, so as to go deeper or shallower at pleasure, notwithstanding the greatest variety in the tenacity of the soil. At the extremity of the beam there are three holes, about four inches apart, and by one or other of these they fix it to the yoke. If they want to set the plough deeper into the ground, they put the pin through the furthest hole, nearest to the extremity or point of the beam; but when they want the plough to go more shallow, they put the pin through the hole which is furthest from the point. When the land is so stiff, that they cannot by these means keep the plough shallow

enough, they have an easy method to sink the beam, or in other words, to raise the point of the share, which a sight of my drawings will explain.

It is impossible to pay more attention to the construction and use of ploughs, for all the different purposes of husbandry, than they pay to this important subject in the country about Barcelona. The harrows have iron furniture. As for wooden rollers, they are not to be expected where wood is so very scarce. To break the clods they use a board, on which a boy standing drives the mule. Their hoe is almost as wide and as heavy as our spades, but set in such a manner, as to form an angle of about thirty degrees with the handle, so that a man must stoop very low to use it. For my part I should prefer a spade; but this, perhaps, may be the prejudice of education. The *noria* must be considered as one of their implements in husbandry. It is here constructed somewhat differently from that which I have before described. The noria of Barcelona is the original chain pump, or at least its parent, as having suggested the idea on which the chain pump is formed, and from its simplicity appears to have derived its origin from the most remote antiquity; it consists of a band or girdle passing over a sprocket wheel long enough to reach eighteen inches, or two feet below the surface of water in a well. All round this band, at the distance of about fifteen inches, are fixed jars of earthen ware, which, as it turns, take up water from the well, and pour it into a cistern fitted to receive it. A little ass going round his walk, with ease turns a trundle, which gives motion to a cog wheel fixed on the same axis with the wheel on which the band is hung,

and with which it turns, thus producing a constant and considerable supply of water at a small expense, and with very little friction. As the air would obstruct the entrance of water into these jars or bottles, each jar has a little orifice in its bottom, through which the air escapes, but then water follows it, and a certain quantity falls back into the well. It is true, as the jars rise in one straight line, the water which runs out of the superior jar is caught by that which is immediately below it, yet still there is a loss, and besides this inconvenience, the whole quantity is raised higher than the reservoir, at least by the diameter of the sprocket wheel, because it is only in their descent that the jars are emptied. The chain pump boasts undoubtedly many and great advantages over this machine; yet the chain pump itself is not free from imperfections. If the valves are not well fitted to the cylinder through which they move, much water will fall back; if they are well fitted, the friction of many valves must be considerable, besides the friction of the chain round the sprocket wheels, and of the wheels themselves. Chain pumps require a great number of men to work them, not in the open air, but under deck, where the heat is great, and the fatigue insufferable. The preference, therefore, which has been given to chain pumps over those which work by the pressure of the atmosphere, must have arisen from this one circumstance, that they have been found less liable to choke.

In point of friction, and of cheapness, the sucking pump has so evidently the advantage over the chain pump, that it will not fail to gain the preference, whenever it shall be no longer liable to be

choked with gravel and with chips. Many and various have been the expedients thought of by mechanics to improve this pump; the one which caught attention and was adopted in our navy has, upon trial, been found defective. This was, instead of common valves with joints, to have cylinders with holes in the sides, but closed at top, moving in brass boxes, and known by the name of canister valves. These have been found of all others the most liable to jam, and to become immovable by the introduction of sand between the canister and box. For this the public is indebted to Mr. Cole, who having acquired fame by executing the improvements of the chain pump invented by Captain Bentinck, readily obtained the credit, which was by no means due to him, for more than common ingenuity in this invention of his own. In the model, and with clean water, his experiments succeeded, and gained the approbation of the Admiralty Board, who immediately gave orders for their introduction in our ships of war. To this hasty approbation has been attributed the loss of the Centaur, and of some other ships returning with her from the West Indies. It is, indeed, impossible to say how many ships have perished in consequence of this change in the construction of our pumps, as the most fatal accident which can happen to a vessel under the pressure of a storm is the choking of her pumps. The Admiralty Board can never be too cautious in the examination of improvements, nor too much upon their guard how they give credit to certificates in favour of any which they have ordered to be tried. In the new edition of Chambers' Dictionary, lately given to the public by Doctor Rees, we have a description of Captain Bentinck's chain pump, the excellence

of which will never be called in question; whilst credulity itself, can by no means find it easy to believe the report of experiments, tried on board the Seaford frigate, and signed by Rear-Admiral Sir John Moore, twelve captains, and eleven lieutenants of his Majesty's navy. It is stated, that with the old chain pump, seven men were seventy-six seconds raising one tun of water, whereas with the new pump two men raised the same quantity in fifty-five. Had Sir Thomas Slade, who was then surveyor of the navy, and Captain Bentinck, been upon better terms, this report had certainly been drawn up in a manner more agreeable to truth, or at least the experiments would have been conducted with that degree of caution which would have done more credit to the integrity of those who were to sign, and to the understanding of those who were to receive the report. Notwithstanding the acknowledged and most undoubted superiority of the new pump over that which had been previously used, it must have been evident to every one, competent to judge between them, that this trial was not conducted fairly.

The imperfection of sucking pumps is prevented by a late improvement, which bids fair for universal approbation. Mr. Taylor, of Southampton, the same gentleman to whom not only England, but all Europe is indebted for blocks, which, by long experience, have been found perfect both in point of strength and of prompt obedience; at the request of some naval gentlemen, applied himself to the consideration of this matter, and soon found a remedy, which, in all probability, will bring this pump nearer to perfection than any which has been hitherto employed. He began with taking away

the lower valve, together with its box, and in its place he substituted a ball, falling down into a part of the same chamber in which the upper piston works, contracted for that purpose; but as it was not easily extracted, instead of this, he took the segment of a sphere; and in its centre he riveted a pendulum. By this simple contrivance, the chips and gravel pass without inconvenience, and the pendulum-valve falls back into its place. Nothing can be more promising in its appearance; it remains for time and for experience to confirm the judgment, which has been formed of this improvement.

At Barcelona, some gentlemen who excel in mechanical invention, sensible of the peculiar imperfections of the *noria*, have studied how to avoid these in a machine which they have constructed, and which is not altogether void of merit. The beam, to which the traces of the horse are fixed, is near eight feet long, of course the diameter of the horse-walk is sixteen feet, and that of the horizontal lantern or trundle is near four feet. A vertical wheel moved by this is of the same diameter, and gives motion to a vertical lantern or trundle of two feet seven inches, and thereby to a water-wheel of ten feet and a half diameter. The movements in this machine are too complicated, and thereby both the expense and the friction are increased. Besides this, the horse-walk is too small, and the beam being behind the horse, instead of being placed over his shoulders, the line of draught makes with it an angle of forty-five degrees, and thereby one half of his force is lost. These mistakes are not uncommon, and for that reason only they are mentioned in this place. That which fixed my attention, was the construction of the water-

wheel. It is a cylinder, divided into two portions by a septum parallel to its sides. In each portion there are chambers formed by four partitions, which make a square whose angles touch the circumference of the wheel, so that each chamber is the segment of a cylinder. The partitions on one side of the septum are not parallel to those on the other side, but are placed in a different direction, so that when of those which are on one side, two are perpendicular, those on the other side make an angle of forty-five degrees with the horizon. In each of these chambers, there is an opening to receive the water, of one quarter of the arch. A leather collar embraces the wheel, where it discharges the water, to prevent waste. The peculiar excellence of this wheel is, that no water is lost after it has been received into the chambers; but then with all this machinery, the water is raised less than eight feet high. Round all the reservoirs, they construct a parapet-wall for washing linen, as I have described already.

For hemp, they have a machine similar in its form to that which is used in all our sugar islands for bruising canes, but differing in its materials, and in the position of the whole. Here they place the three fluted rollers, made of oak, one above the other, causing them to act upon the hemp as it passes between them, not only by their weight, but by the pressure of two strong springs. A mule turns a wheel, which giving motion to the lowest cylinder, makes the uppermost revolve in a direction opposite to its own; and, as behind them there is the section of a drum, or hollow cylinder, to stop the hemp, and direct it in its return, that which has passed

between the uppermost and the middle roller, comes back bruised between the middle and under rollers.

The common course of husbandry about Barcelona is wheat, which being ripe in June, is immediately succeeded by Indian corn, hemp, millet, cabbage, kidney beans, or lettuce. The second year, these same crops succeed each other as before; the next year they take barley, beans, or vetches, which coming off the ground before Midsummer, are followed, as in the former years, by other crops; only changing them according to the season, so as to have on the same spot the greatest possible variety.

The common produce of wheat is ten for one, but in the rainy seasons they get fifteen; all these crops are watered, when water is to be had, either by some spring or by the noria.

April 24, they were ploughing for hemp, which they expected to cut the middle of July; after which, they proposed to put in turnips, parsnips, and lettuce, for the autumnal market. The land will bear flax, but they find hemp more profitable.

I was much struck with their mode of filling the dung cart. For this purpose, they have three men, one in the cart, one on the heap, and one between them to carry the little basket, after the latter with his three-pronged fork has filled it. They smiled at my simplicity in thinking, that if all had prongs the cart would be filled much quicker; and it is only for expedition that they have hit upon this method.

In the country, at some distance from the city, they pay for wages in husbandry, from ten pence to one shilling sterling a day for

men, and half as much for women; but carpenters will get sixteen pence, and masons two shillings.

The rigid parsimony of Catalans, appears in their scanty provision for the day. When they carry their little basket to the market, together with their beef and garden stuff, they bring home two deniers worth of charcoal. This circumstance is so characteristic, that when they would reproach the rich miser for his penury, they say notwithstanding his opulence he still continues to send to market for *dos dineros de Carbon.* Twelve deniers make a penny.

Their *dress* is singular. They have red night-caps over a black net which receives the hair, and hangs low down upon their backs. Their waistcoat or short jacket, with silver buttons, is close, and bound with a long silk sash passing many times round their loins, and then tucked in.

In Spain, Italy, and Africa, all the inhabitants bind themselves up with sashes, as a preventative of ruptures. Certain it is, that these are very common; but when we consider that the nations which use no sashes are not much subject to ruptures, we may perhaps be led to attribute this accident to relaxation, which must be promoted by the very precaution which they have adopted to prevent it.

Their breeches are commonly black velvet; they have seldom any stockings, and sandals supply the place of shoes.

No people upon earth are more patient of fatigue, or, travelling on foot, can outstrip them. Their common journey is forty miles, but upon occasion they will run three-score. For this reason they

make good guides and muleteers; being employed as such all over Spain, and trusted without reserve, on account of their integrity.

The environs of Barcelona are friendly to botanical pursuits, and the city is not destitute of some who cultivate this science. I received much assistance from Don Ignatio Ameller, an apothecary, whose library would do honour to the first botanist in Europe. To him I frequently recurred, and found him conversant with the best authors who had written on this subject. There is also a young man, whose employment is to collect medical plants for the apothecaries; in him I found an excellent disciple of Linneus, and collected from his hortus ficcus, such plants as I had not met with in my walks, all arranged according to their classes. Among these I found the following: Canna; Salicornia; Blitum; Valeriana; Veronica, both the vulgaris and the becabunga; Syringa; Ligustrum; Olea; Phillyrea fl. lut; Rosmarinus; Salvia of several species; Jasminum; Gratiola; Pinguicula; Verbena; Lycopus; Justicia; Crocus sativus; Nardus montana; Ixia; Gladiolus communis; Iris vulg. flor. Ceruleo, and palustris fl. luteo and fætidissima, with the Iris bulbosa flore variegante; Cyperus rotundus; Plalaris; Arundo; Gramen officin. dactylis; Holosteum; Scabiosa vulg.; Scabiosa specias; Globularia Dipsacus silv. Galium; Gallium luteum and album; Rubia tinctorum; Cruciannella; Plantago major vulg.; Coronopus vulg.; Psyllium; Pimpinella; Cornus; Alchemilla: Cuscuta; Potamogeton; Ilex; Heliotropon; Myosotis; Lithospermum; Anchusa; Buglossa vulg.; Cynoglossum vulgare; Onosma; Echium; Asperugo; Consolida major; Pulmonaria maculata; Borago hortensis; Cortusa; Primula veris and Auricula; Verbascum; Campanula;

Convolvulus marinus; Scammonea; Polemonium; Cyclaminus; Anagallis fl. rub.; Lysimachia fl. lut.; Lonicera; Ribes; Coris; Physallis; Atropa Hyoscyamus; Capsacum; Mirabilis; Datura; Solanum; Glycypitros; Lycopersicon; Melongena; Rhamnus; Frangula; Euonimus; Nerium; Vinca; Asclepias; Salsola; Ulmus; Herniaria; Gentiana major; Centaurum minus; Echinophora; Eryngium; Sanicula; Bupleurum; Daucus; Caucalis; Ammi; Bunium; Conium; Apium; Athamanta; Crithmum; Lacerpitum; Sphondylium; Ligusticum; Imperatorium; Arigelica; Cuminum; Smyrnium; Thapsia; Anethum; Ferula; Sium; Oenanthe; Coriandrum; Chœrophyllum; Carum Scandia; Rhus; Tinus; Sambucus: Parnassia; Linum; Drofera; Statice; Lilium cand.; Lilium fl. nutante hemerocallis; Lilium fl. nut. martagons fl. purp. Lilium radice asphodeli; Pancratium; Amaryllis; Allium sylvestre; Porrum; Cepa alba; Leucojum bulbosum; Ornithogalum fl. lutea; Narcissus; Scilla; Tulipa; Asphodelus; Lilium Conval; Hyacinthus fl. cerul; Corona imperialis; Fritillaria; Erythronium; Asparagus; Juncus; Tradescansia; Aloe; Berberis; Lapathum acutum; Rumex; Colchicum; Alisma; Æsculus; Tropœolum; Epilobium; Ænothera Daphne; Polygonium; Fagopyrum; Bistorta; Persicaria; Herba Paris; Laurus nobilis; Rheum; Butomus; Senna; Cassia; Dictamnus fraxinella; Ruta; Tribulus; Melia; Arbutus uva ursi, Rhododendrum; Pyrola; Saponaria; Saxifraga; Dianthus; Cucubalus; Arenaria; Stellaria; Sedum; Lychnis; Oxalis; Trydactylus; Phytolacea; Asarum; Peganum; Portulaca; Lythrum; Agrimonia; Reseda; Euphorbia; Tithymalus pinea; Sempervivum; Cactus opuntia; Cactus scandens; Philadelphus; Psidium; Myrtus; Punica granatorum; Cerasus; Amygdalus; Crategus; Sorbus;

Malus; Pyrus; Oxyacantha; Mespilus; Ulmaria; Filipendula; Rosa; Rubus; Fragraria; Tormentilla; Quinquefolium; Geum.

The algarobo (ceratonia edulis) near the sea, and to the south, is one of their most profitable trees; tender, yet requiring no attention, beautiful in its foliage, luxuriant, and commonly loaded with fruit, which is given to their cattle; not only to those which work, but to their oxen, when they are to be fatted for the shambles. The pod is long, and contains many seeds, abounding with saccharine matter. It is exceedingly pleasant and nutricious. It is ever green.

Barcelona, as a residence, is not only delightful, but healthy. There are indeed, some days, when all the inhabitants, but more especially strangers, are inclined to think it both unhealthy and unpleasant; that is, when the east wind brings in the fog which for many days before had been observed standing off at sea, as if watching and waiting for an opportunity to land. The pores are then locked up, and the temper becomes so irritable, that the best friends must be careful how they meet. But no sooner does the land breeze spring up, than the fog retires, the sun breaks out, and all nature wears a smile. In Barcelonetta, and the citadel, in which a garrison of five thousand five hundred men is quartered, intermittents never cease to rage. These bring on in winter, dropsies and jaundice, and in summer malignant fevers. The same diseases reign beyond Monjuich, in the low country watered by the Lobregat; but although the prevailing wind in its passage becomes loaded with miasmata, yet being diverted from its course by that high mountain, it has no baleful influence on Barcelona.

JOURNEY

FROM

BARCELONA TO MADRID.

WHEN I had nearly satisfied my curiosity, and had seen almost every thing worthy of attention, I began to think how I was to proceed in my tour through Spain. Not having as yet acquired the language, I was by no means qualified to travel alone; but as my intention was to go directly for Madrid, I was informed, that in the course of a few days some opportunity would offer to join with three others in the hire of a coach. In the mean time, I continued my excursions in the country, and visited again those places which had struck me most.

At length, having made a party with three officers in the Spanish service, two of them natives, the third a Frenchman, who were all going to Madrid, we hired a good coach with seven mules, and left Barcelona, on Saturday, *May* 6, in the afternoon. That evening, we travelled five leagues on the banks of the Lobregat, and lay at

Martorel. This place is famous for Hanibal's bridge, with its triumphal arch. I should have been happy, had the time permitted, to have made a drawing of these venerable remains, with the high mountain which rises near them, to the east, and Montserrat, which is seen at the distance of three leagues, hiding its lofty summit in the clouds.

Martorel is one long narrow street, in which poverty, industry, and filth, although seldom seen together, have agreed to take up their abode. The inhabitants make lace, and even the little children of three and four years old, are engaged in this employment.

The next morning we came to Piera, at the foot of *Montserrat*, that is serrated mount, no longer appearing like a sugar loaf, but rather like a saw, rising almost perpendicular, and lifting up its rugged rocks like pyramids to meet the clouds. Of all the countries I have seen, few have ever struck me like this in the vicinity of Montserrat. The mountain is calcareous; but that which is most remarkable, is, that the whole is pudding-stone, composed of limestone gravel, formed into one hard mass by a calcareous cement, and yet of such stupendous height, that from its craggy summit are seen the islands of Majorca and Minorca, at the distance of fifty leagues. On the same mountain are found rocks of grit, or sand stone; and according to Bowles, the lapis lidius is no stranger there. All the country near this surprising mountain, would, if it were more distant, appear mountainous; it is every where torn by deep ravines, laid open to the depth of one hundred and twenty feet, and appears to be composed of broken schist, with clay and sand. The rocks, which

here and there peep through the soil, are evidently tumblers from Montserrat, and serve to shew the nature of that mountain.

This singular phœnomenon is rendered more remarkable by a stupendous mountain in its vicinity, described by Bowles; a mountain of three miles in circumference, near the village of Cardona, which is one mass of salt. This mountain is equal in height to those of the Pyrenees, on which it borders. In a climate like our own, such a mass had long since been dissolved, but in Spain, they employ this rock salt as in Derbyshire they do the flour spar, to make snuff-boxes and vases, with other ornaments and trinkets. I carried a little fragment with me all through Spain, without the least sign of deliquescence; but when I came to England, I soon found it surrounded with a pool of water. I understand, that near the mountain are seen sea-weeds, but this circumstance escaped my observation.

I shall not at present make any observations on the formation of these mountains; yet one circumstance I would wish to be remembered in the rocks of Montserrat, which is, that in some of the strata the gravel is smooth and rounded, like shingle found upon the sea beach.

After having travelled many leagues, with Montserrat constantly on our right, and rising above us like a wave when it is prepared to burst, we began to increase our distance from its base, and winding to the left, descended among the mountains which border on the Noya, and which are composed of *white granite*. The ravines here are wider and deeper than those which we had seen the day before, and leave no room to doubt in what manner mountains acquire their

form. But whoever travels through this country, and sees how nature has been convulsed, must look for some more powerful agent to account for the phœnomena, than water and the most raging torrents.

Having crossed the Noya, and keeping along its banks for about half a mile, through a narrow pass, with the river on our right, we had on our left, cliffs rising perpendicular to the height of near two hundred feet, composed of calcareous incrustations, by the French called tuf, inclosing snails and leaves, like that which is between Montpelier and Montferrier. It had happened opportunely, that as we were descending to the river, the coach was overturned, which gave me time to walk forwards, and not only to examine, but to make a drawing of the cliff, with its pendent rocks and caverns. Happily we received no other injury than a few trifling bruises, and a delay of about half an hour. At the end of this short interval, we were jogging on again towards Igualada, where, after having three times passed the Noya, we arrived about the setting of the sun.

The country which lies round this lovely village is rich, highly cultivated, and well watered, hilly, and broken by ravines. The rock is schist, and the strata are horizontal. As we advance the schist whitens, and becomes mixed with calcareous earth, till by degrees we lose the schist, and after observing for some considerable space limestone rock covered with white earth and clay, we meet only gypsum. In the same progress we lost at first the vine, then the olive and the ilex, till nothing remained but the quercus coccifera, and the oak.

The ploughs of this country are the degenerate offspring of those

near Barcelona, not so well executed, but constructed upon the same general principles, with this difference, that they have no mould-board, no fin, and no coulter to be occasionally used.

The gypsum soon gave way to a vast expanse of *Chalk*, before we reached *Cervera*.

This city is in a most delightful vale, which is extremely fertile, and surrounded by hills, on one side of *chalk*, on the other of limestone. This part of the country, between the Noya, which runs into the Lobregat, and the Segre, which joins the Ebro, is the highest land in this part of Catalonia. The university in this city was founded by Philip V. (A. D. 1717) and has commonly about nine hundred under graduates, chiefly designed for employments in the church and at the bar, with some few for medicine.

Having ascended from Cervera, the limestone rock appears, and the hills are covered near the city with vines, but at a greater distance with olives in vast plantations. As we advance, the limestone gives way to *chalk*, and in the same proportion, barrenness succeeds to plenty, but when the *chalk* is again replaced by limestone, the face of the country improves, and the hills are once more covered with vines and olives.

At *Tarraga* we fared sumptuously, and had a good hall to sup in, with single bedded rooms, and glass in all the windows.

This village is situate in a valley of great extent, bounded by distant hills, the soil is clay, yet the crops look sickly. The fields are all in tillage. They plough with mules.

Approaching *Lerida*, the valley becomes less fertile in its nature, being chiefly a hungry sand covering a bed of gravel, chiefly silicious, with *granite* of every species. This, from the situation of the country, might be well expected, considering the multitude of rivers which here unite their streams, all rising in the Pyrenees, and flowing from mountains which extend, east and west, more than an hundred and twenty miles.

Lerida is a pretty little city, with a cathedral, four parish churches, and sixteen convents, thirteen for men, and three for women. It is situated on the *Segre*, under the protection of a hill, on which are seen the ruins of a castle, now going to decay, but formerly of considerable strength.

The rock on which it stands is silicious grit with a calcareous cement. This city, called *Ilerda* by the Romans, was rendered famous by the distress to which Julius Cæsar was reduced when encamped in its neighbourhood, He had taken possession of a plain shut in between the rivers *Cinga* and *Sicoris*, and defended by a deep intrenchment, whilst Petreius and Afranius, Pompey's Generals, were encamped on a hill between him and Ilerda. In the intermediate space, between the hill and the city, is a plain of no great extent, with an eminence, which, if seized, might be quickly fortified, and being fortified, would cut off all communication with the city. For this, during five hours, they maintained a doubtful conflict; but in the end fortune declared in favour of Afranius, and Cæsar retreated to his camp. Whilst revolving in his mind how he should cover this disgrace, word was brought, that by the melting of the snow upon the mountains, his

two bridges were broken down, that the country was laid under water by the overflowing of the rivers, and that all communication was cut off with the provinces by which his army had been fed.

The immediate consequence was famine. Whilst he remained in this situation, messengers were sent to Rome, and all gave him up for lost. It was upon the news of this distress that Cicero left the city, and joined Pompey at Dyrrhachium. Cæsar, without loss of time, set his men to work, and having made a sufficient number of little boats, light and portable, like those which he had seen in Britain, after a few days sent a party up the river in the night, who, with these boats, made good their landing, and having fortified a camp, secured his retreat.

The situation of Lerida is delightful, and the country in which it stands is one continued garden, covered with corn, with olive trees, and vines. For beauty, few places can exceed it, but from the abundance of water, it is far from being healthy; and, since the year 1764, this city, with the villages of Tarraga, Igualada, and Martorel, and all the surrounding country, has been ravaged by a malignant fever, which was spread by the French troops in their return from Portugal.

Alarmed at the progress of this destructive fever, the king lately sent one of his physicians, Don Joseph Masdeval, to examine the symptoms, and to instruct the faculty in the best method of treating it. His practice is so remarkable and the attestations in its favour are so respectable, that, in treating of Carthegena, I shall lay them before the public. Previous to his arrival, notwithstanding every

symptom of debility, and prostration of strength, the physicians had continued to order bleeding as long as there was any blood to flow. Whilst, however, we smile at their simplicity, we may too well remember when the same was the pernicious practice in our island.

The antiquities of Lerida, with its castle, and all that relates to the cathedral, are well described in a work lately published by D. Joseph Fenestres.

Being now at the extremity of Catalonia, it became necessary to lay in a stock of provisions sufficient to serve us till we should reach Zaragoza, or at least in aid of those which we might purchase by the way. Hitherto we had fared well; but now a little forethought became absolutely needful. In Catalonia, the traveller is under the protection of the magistrate, who settles the price of every thing he may want, and annually publishes his *arancel*, that is, a table of assize, which must be hung up in some conspicuous place of every inn. According to this, every guest occupying a bed-room with one bed, must pay for that and his light, three sueldos and nine deniers, or something less than five-pence; but if there are several beds in one room, then each pays two-pence halfpenny nearly, or two sueldos Catalan. If he does not occupy a bed, he must pay for shelter six deniers, or $\frac{1}{4}$ of a penny. Every carriage pays one sueldo per night for standing. The ordinary is regulated as to the number and nature of the dishes, both for dinner and for supper; and for these the prices are, including bread and wine for dinner, fifteen sueldos, or one shilling and seven-pence farthing, and for supper, fifteen sueldos, three deneirs.

	Rs.	ds.		Sterling. s.	d.
For a moderate-sized fowl - -	4	12	——	0	11½
Ditto small - - - - -	3	20	——	0	10
Capon, if great - - - -	9	20	——	2	1
Ditto, small - - - -	8	0	——	1	8
Turkey, great - - - -	30	0	——	6	5
Woodcock - - - - -	10	0	——	2	1
A dozen of eggs - - - -	2	16	——	2	7
Mutton, per pound of 36 ounces	4	12	——	0	11
White bread, ditto - - -	1	12	——	0	4
Ditto, second - - - -	1	0	——	0	2
Flour, ditto - - - - -	1	0	——	0	2½
Rice, ditto - - - - -	1	6	——	0	3½
Maize, or Indian corn, ditto -	0	12	——	0	1½

The above is reduced into sterling by approximation, to avoid fractions of a farthing. It must be observed, that the reals in Catalonia are *ardites*, containing two sueldos, or twenty-four deniers, which I here suppose equal to 2⅐ of a penny sterling.

From Barcelona to Lerida is twenty-five leagues, or nearly one hundred miles. From Lerida we came to Alcarez, two leagues.

Here you turn your back upon Catalonia, and are reminded at every step that you have entered a new kingdom. The red cap and the black velvet breeches are no longer seen, but in their stead a black velvet bonnet, peaked like the mitre, and short white trowsers, called *bragas*, reaching more than half way down the thighs, constitute their dress. The face of

the country is likewise changed, more hilly, and broken by torrents, not altogether barren, but uncultivated, and left desolate. For many miles together there is neither house nor tree, nor man, nor beast, except a few straggling carriers with their mules, and by the road side are seen wooden crosses, to mark the spot, where some unhappy traveller lost his life. The passengers think it a work of piety, to cast a stone upon the monumental heap; according to some, as a mark of detestation and abhorrence of the murderer, or, as others think to cover the ashes of the dead. This, in all ages, and by every nation, has been considered as a deed of mercy, because to remain unburied, was regarded as the greatest misfortune and disgrace. The *inops, inhumataque turba* was supposed to wander on the banks of the Styx, excluded from the Elysian fields, restless and miserable, one hundred years, unless their bones were previously covered, Virgil, Æneid vi. ver. 325. Whatever may have been the origin of this practice, it is general over Spain, and round most monumental crosses is seen a heap of stones.

All the way from Lerida, the deep raviñes shew limestone rock in strata, which are separated by sand and clay.

Having crossed the Cinca, and passed through Fraga, which is built in one of these deep ravines, we begin to ascend the mountains, where we see the same horizontal strata of limestone, with clay between them. These mountains produce only aromatic herbs.

In traversing this barren country, a conjecture naturally arose, that Catalonia either acquired sovereignty before the establishment of Arragon, or that the people, by whatever name they were distinguished,

were more warlike than their neighbours: for had the kingdom of Arragon, if, referring to distant periods, we may call it by that name, been founded first, or had the inhabitants excelled the Catalans in strength and courage, they would have left these mountains, and would have extended their dominion to the east.

The first night after we had crossed the Cinca, we lay at Candasnos, a miserable village without one convent, a circumstance which sufficiently bespeaks the extreme poverty of its inhabitants.

Round this village I observed abundance of flints, such as we find among the *chalk* in England, much limestone, and some gypsum. The inhabitants employ themselves in collecting and washing earth, for the purpose of extracting the nitre and sea salt, which it contains in great abundance.

I was much diverted to see the astonishment with which these aborigines viewed one of our fellow-travellers, a Frenchman, but a colonel in the Spanish service. They are a diminutive race, and he is six feet six inches high, stout, well made, and of a soldier-like appearance, yet he could scarcely make them keep their distance. These pigmies are no strangers to gallantry, as we could all testify; for, as ill-luck would have it, opposite to us there lodged a fair one, for whom a desponding lover had prepared a serenade. No sooner had the village clock struck twelve, than he began to sing the praises of his mistress, beating time upon the discordant strings of his guitar. It is impossible to construct a scale of sensibility or taste, or to ascertain precisely to what degree the ear is tuned to harmony; but should such a scale be formed by any one who has never heard

these ditties in some of the villages of Spain, like Farenheit with his thermometer, he will be inclined to place his lowest point abundantly too high.

By the time this lover had retired to his rest, we were obliged to rise, and to prosecute our journey.

From Candasnos we traversed a barren plain of gypsum, twenty miles, without seeing either house, or man, or beast, or bird, or tree, or bush, except only in one spot, where, to my astonishment, on apparently the same kind of soil, the olive flourished.

At the end of this tedious morning we came to a single house or venta, in which we were to dress our dinner. Here we found a party of soldiers stationed to scour the country, and to pursue the robbers, who had been accustomed to consider this part of Arragon as abandoned to them, with full liberty to plunder all who should venture to pass through it. The soldiers knew our colonel, and offered to escort us on our way; but as we had three officers, all well armed, we did not think it needful to accept their kindness.

Whilst the dinner was preparing, I took the opportunity of climbing a hill at no great distance, which commands a most extensive prospect; but in that vast expanse, far as the eye could reach, nothing was to be seen but a naked gypsum rock. It is here that nature seems to sleep, and to have slept some thousand years; or at least it is here that she has either neglected or forgotten her accustomed operations in forming vegetable earth. Turning from the dreary landscape, I hastened back to dinner, satisfied that nature never appears so beautiful as when her face is covered with a veil.

Having dined, we proceeded on our way, and till we began descending to the Ebro, had nothing but the gypsum rock in sight, excepting for some short intervals, when we saw the more fertile limestone. The whole of this gypsum is a selenite.

When we had reached the plain, which is watered by the Ebro, we left that river to the left, keeping the gypsum mountains on our right till we came near to Zaragoza, where the valley widens, and where considerable hills, entirely composed of flints, interpose between the river and those barren mountains.

As we approach the city, the prospect brightens, the hills on our right shew the hanging clusters of the vine, and the margin of the Ebro is covered with luxuriant crops of corn interspersed with olives. Here the wines are excellent, more especially in dry seasons; but these do not yield as good brandy as the weaker wines of France. Indeed it is a pity that such generous wines should ever be distilled.

In long journies, it is usual to give the mules one day's rest, about the middle of the way. Happily for me this place of rest was Zaragoza, being fifty computed leagues from Barcelona, and fifty-two from Madrid. Each league is about four miles and a half.

Zaragoza, by ancient Spanish authors, written Caragoca, and by the Romans, called *Cæsarea Augusta*, is a great wealthy city on the Ebro, at the conflux of two other rivers, one running from the north, the other a considerable stream, descending from the mountains of the south.

Immediately on my arrival, I visited the cathedrals. Here I forgot all the hardships and fatigues which we had suffered in this long

journey; nay, had I travelled all the way on foot, I would have have freely done it to enjoy the sight of these cathedrals: that which is called *El Aseu* is vast, gloomy, and magnificent; it excites devotion, inspires awe, and inclines the worshipper to fall prostrate, and to adore in silence the God who seems to veil his glory; the other called *El Pilar*, spacious, lofty, light, elegant, and cheerful, inspires hope, confidence, complacency, and makes the soul impatient to express its gratitude for benefits received.

In the centre of this cathedral, is an edifice which is strikingly beautiful. Whilst I was engaged in making drawings of it, there came in a lady and knelt before the Altar. Our Colonel quietly approached and knelt beside her, when a conversation immediately commenced, "Madam, this is a beautiful edifice." "Yes, Sir, it is." "But methinks I see something more beautiful than the edifice," "Sir, this is not a place for paying compliments," "True Madam, but it is the place of all others most proper for admiring the workmanship of Heaven." The lady rose up and left the church, and the colonel retired to our inn. The principal front is a chapel of our Lady of the Pillar, who appeared upon this very pillar to St. James, and afterwards gave to him the image which is worshipped at her altar. Over this there is a dome corresponding to the great dome, under which it stands, serving by way of canopy to the image of the virgin. The three other fronts of this elegant tabernacle are in like manner chapels. Besides the great dome, there are many smaller domes surrounding it, each with elegant paintings in compartiments, the subjects of which are historical, taken from the sacred writings,

or from the legends of the saints, to whom the chapels and altars are dedicated. These are executed by D. Francisco Bayeu, first painter to the king; and the architect, under the inspection of whom these domes have been constructed, is Rodriguez, of whose taste and judgment these decorations and improvements will remain a lasting monument.

The wealth of this cathedral is inestimable, in silver, gold, precious stones, and rich embroidery, sent by all the catholic sovereigns of Europe to deck its priests, and to adorn its altars. Many of these presents being modern, are worthy of attention for their elegance, as well as for the value of their pearls, diamonds, emeralds, and rubies. In a word, whatever wealth could command, or human art could execute has been collected to excite the admiration of all who view the treasures of this church.

Among the other objects worthy to be seen, is the church called *Engracia*, whose patron saint is said to have walked a league, carrying his head in his hands, talking all the way, and in this manner presented himself at the gates of his convent. In this church they shew an original painting by St. Luke with many other relics, equally authentic, and not inferior in their value.

Straitened for time, I could take only a cursory view of the environs. In a country like this no living rock is to be expected, nor any thing but what has been moved; the spoils of various mountains brought down by the rivers, and blended here together. The chief deposit in this place is limestone gravel, and on that the city stands. It is much to be lamented, that they have neither stone for building,

nor good clay for bricks; hence all their churches, not excepting the beautiful cathedral, shew cracks from top to bottom. The cement is good, and abounds upon the spot, as may be seen by the bottom of the river, which is a bed of gypsum, commonly used here for making plaster.

Had the time permitted, I should have visited all the buildings recommended to my notice, the convents of S. Ildefonso, S. Francisco, the Dominicans: not to mention thirty-seven others less worthy of attention, with the Audiencia, the Torre nueva in the great square, built by the Moors, and the Torre del Aseu, which was a mosque. Short as was our stay, I stood long contemplating the beauty of the bridge over the Ebro, of six hundred feet, with its centre arch of one hundred, and at last turned from it with regret.

I had brought a letter for General O'Neile, the governor, but unfortunately he was absent at Madrid. This loss was in some measure made up to me by the attention of my valuable friend, the young Spaniard, who had connections in Zaragoza. With him, when I had finished my excursions, I went to drink lemonade and chocolate at the house of the fiscal civil, and afterwards we supped together at Don Philip de Canga's, the fiscal criminal, both men of good understanding, and well informed.

Could I have known before-hand, that so many objects worthy of attention were to be met with in this city and its vicinities, I would have laid my plan to have made a longer stay, and should have derived more advantage from the conversation of these gentlemen.

Among other particulars, they gave me this account of their university: it contains near two thousand students, and for their instruction the doctors constantly residing are, forty in theology, twenty for the canon law, thirty-six for civil law, seventeen for medicine, and eight for arts. The foundation of this seminary was laid A. D. 1118, on the expulsion of the Moors; but the university was not incorporated till A. D. 1474, and from that period it has constantly been cherished and protected by the sovereigns of Arragon.

Near this city passes the famous canal of Arragon, designed to form a communication by the Ebro from sea to sea, between S. Ander, in the bay of Biscay, and Tortosa, on the borders of the Mediterranean, a distance considerably more than one hundred Spanish leagues. This, perhaps, is one of the most arduous undertakings that ever was conceived; to make the communication through the whole extent by water is hardly possible, or if possible, is by no means desirable; because, in passing the mountains of Biscay, which are a continuation of the Pyrenees, only from Reinosa, at the head of the Ebro, to the Suanzes, which flows into the bay near S. Ander, in the space of three leagues, the fall is three thousand Spanish feet. Establishing, therefore, magazines at Suanzes and Reinosa, with a carrying-way between them, from Reinosa they will navigate the Ebro. They have a great command of water: the head of the Pelilla has more than forty large fountains in the space of one hundred yards in length, by forty in breadth, spouting up to a considerable height. This river does not run four hundred yards before it enters the Ebro, which has only three fountains, but these are considerable.

It is remarkable, that between Fontibre (Fons Ebri) and Reinosa, there is a salt lake.

The Ebro is navigable from Logrono to Tudela; and the canal, which begins at Tudela, is finished as far as Zaragoza; from whence it will be carried ten leagues lower before it enters again into the Ebro. At Amposta, below Tortosa, there is another canal, which opens into the bay of Alfarques, to obviate the inconvenience which arises from the frequent shifting of the bed of the Ebro, near its mouth. Not far from Zaragoza, the canal passes the mountain of Torrero by an open cast of forty feet the mean depth for more than a quarter of a league, or about one mile in length. The twelve leagues which they have finished from Tudela, cost sixty millions of reals, which in sterling is six hundred thousand pounds; the twelve leagues are nearly equal to fifty-three miles English, upon a supposition, that they are statute leagues of twenty-five thousand Spanish feet; but if we suppose them to be ordinary leagues, of six thousand six hundred varas each, the twelve leagues will be only forty-two miles and a small fraction. On the former supposition, the expense will be found eleven thousand six hundred and eighty-two pounds four shillings per mile, or six pounds twelve shillings and eight-pence per yard. This expense appears to be enormous; but if we consider that the canals in Spain are nine feet deep, twenty feet wide at bottom, and fifty-six at top; and if we consider the cutting through a mountain open cast more than a mile, we shall not think it unreasonable.

In a calculation, which Mr. Whitworth made for a canal from Salisbury to Redbridge, (A. D. 1771.) he supposed the depth four feet

and a half, and the width at bottom fourteen feet. In these circumstances he allowed three pence halfpenny for every cubic yard; but had the canal been deeper and wider, he must have made his estimate double, treble, or even more; not merely according to the quantity, but in proportion to the distance to which that quantity must be removed, and the perpendicular height to which it must be previously raised. Mr. Whitworth's canal does not contain more than ten cubic yards in each yard in length, and a considerable proportion of this may be done, merely by the spade, without the aid of either pick-axe or barrow; whereas, the Spanish canals contain near forty-nine and one-ninth cubic yards in each yard in length, the greatest part of which is to be moved to a great distance, and from a considerable depth, increasing commonly in hardness in proportion to the depth.

As we crossed this canal near Zaragoza, on our way towards Madrid, we stopped to examine the works; and I must confess that I never saw any so beautiful or so perfect in their kind, as the locks and wharfs; nor did I ever see men work with greater spirit, or in a better manner. The number of men employed is three thousand, of which two thousand are soldiers, the others peasants; to the former they give three reals a day in addition to their pay; but they work mostly by the piece, and receive what they earn.

As we increased our distance from Zaragoza, we quitted the flat country, and began to climb between the mountains, which at a lower level shew horizontal strata of limestone, whilst all the summits, both near us and at the greatest distance, are evidently gypsum. In the valleys we found clay and flints, such as our *chalk* commonly produces.

These circumstances lead to a suspicion, that the gypsum on these high mountains was once *chalk*, although now saturated with vitriolic acid.

We dined at *Muel*. In this little village are many potters, who turn their own wheels, not by hand, but with their feet, by means of a larger wheel concentric with that on which they mould the clay, and nearly level with the floor.

Proceeding after dinner, we left the gypsum mountains at some distance, till we approached *Longares*, which is seven leagues from Zaragoza, where this ridge dies away, and leaves before us a wide extended plain, bounded by distant hills. The soil is clay, with gravel of flint, silicious grit, and white quartz, more especially along the middle of this spacious vale, in which there appears a bed of shingle all smooth and polished, as we see on the sea shore and in brooks subject to strong land floods and torrents. This plain produces most luxuriant crops of corn, with vines, and abounds in sheep.

At eight in the evening we arrived at *Carinena*, one league from Longares, having travelled our eight leagues, which is the usual journey; this we may reckon six and thirty English miles.

Here one of our countrymen left a history behind him, written in English, on the wall, for a warning to those who may chance to follow him. In the night, two men attempted to rob him in his bed; but he happily awoke, and starting up, knocked one down, and made the other fly. The one whom he knocked down was servant to the French officer with whom he was travelling, the other was one of the coachmen. From the observations I have had occasion

to make in Spain, I am of opinion, that no gentleman should sleep in a room alone, unless he has made fast the door.

The wine which this country produces is of the finest quality, and I have no doubt will be much coveted in England whenever the communication shall be opened to the sea.

Carinena contains two thousand and thirty-six souls, and has two convents. From hence we proceeded along a fruitful bottom covered with vines and olives, then ascending among mountains, we found, at a lower level, schist with its lamina standing perpendicular, and soon after silicious grit, inclined to the horizon, then limestone rock.

In this country we past vast tracts of land susceptible of cultivation, which, I have no doubt, will be one day covered with luxuriant crops, although at present we see little besides the quercus coccifera, and a few aromatic herbs.

Crossing the river Xiloca, at the distance of five leagues, we came to Daroca, where we dined.

This city, inclosing within its walls two thousand eight hundred and sixty-three souls, is built in a ravine, and would have been swept away by torrents, had not the inhabitants made a drift of six hundred yards through the heart of a mountain, to open a communication with the river. This work is worthy of inspection.

Daroca appears to have been always of importance, as the fortifications, although now decayed, sufficiently evince. It formerly occupied the hills for safety, but now it has crept down into the vale for shelter.

The rocks which are here laid bare, are schist, covered with lime-stone.

Climbing among these, it is beautiful to look down upon the vale, which feeds the city, every where shut in by uncultivated mountains, itself well watered, covered with deep verdure, and loaded with the most luxuriant crops. To view such a strip of land, excites a wonder how the inhabitants can be fed

The exquisite beauty of this spot, and the protection which it offered, were powerful attractives to the priests and to the religious orders, who in this city, have no less than six convents and seven parish churches, of which, one is collegiate, although not a bishop's see.

After dinner we ascended to much higher mountains, in which the schist and the silicious grit appear in strata, inclined to the horizon in every angle, and in every possible direction. All nature here seems to have suffered the most violent convulsions.

These mountains must certainly abound with minerals, of which we see every mark but the mineral itself. Indeed, when the Romans settled here, it was with a view to mines. From the nature of the rock, and from the peculiar appearance of the schoerl, I have no doubt that *tin* is not far off.

We are here on the highest land in Spain, with the water falling behind us into the Ebro, whilst immediately before us it runs into the Tagus

When we begin descending to the south-west, we observe a deeper soil, fewer crags, and the strata more inclined to the horizon, than we found in the declivity to the north and to the east. This circum-

stance will appear perfectly natural, when we consider that in the latter direction, the water does not run much more than one hundred miles before it enters the sea; whereas in the former it must go nearly six hundred miles to find the ocean. Yet this circumstance will not account for the confusion which appears in all the strata as we ascend from Daroca; the sea shells which every where abound in the limestone, wherever it is found on these high mountains, prove sufficiently that this country was once covered with the sea.

Without entering at present on the different solutions which have been given of these phænomena, I shall only transiently observe, yet I wish it to be remembered, that these strata are not now in the same position in which they lay, when the whole peninsula was covered with the waters of the sea. There has been wonderful dislocation.

On these mountains, both in the morning and the afternoon, we observed many monumental crosses, each placed near the spot on which the unwary traveller had been robbed and murdered, or had met with some fatal accident. At this, considering the nature of the country, I was not surprised; but I must own my blood ran cold, when I saw some crosses in the villages through which we passed. Their numbers sufficiently evince, not only a bad disposition in the inhabitants, but a bad government. No people can be more passionate than the *Welch*, yet in Wales we seldom hear of murder: they do not thirst for blood, and should any one feel himself provoked to take away another's life, he would tremble at the laws.

But in Arragon this crime often passes with impunity, unless as far as one murder is the parent of another.

The escrivanos, who perform the office of coroner, are many of them poor, hungry, rapacious, and destitute of principle; and without them no evidence can be received. These venal wretches, are commonly prepared with equal indifference, to sell justice or injustice to him who offers most; and all over Spain they have free scope in the country towns, because few gentlemen live in or near a village, to protect the peasant, being mostly resident in cities.

We lay in the miserable village of *Uset*, the last in Arragon, and two leagues from Daroca.

Having neglected to lay in provisions before we left that city, we began for the first time, but not the last, to suffer want, and to murmur at the inattention of our captain. When we left Barcelona, a common fund was made to pay the expenses of the journey, and we immediately proceeded to the election of a treasurer. The parties were our colonel, a Frenchman, tall, handsome, elegant in his manners, sensible, well-informed, perfect master of the language, and well acquainted, not only with the mode of travelling in Spain, but with the precautions needful to be taken by those, who would pass with any comfort from Barcelona to Madrid. Naturally our choice should have fallen upon him, but unfortunately there were objections which every one felt, but which no one dared to name. As a stranger, and as ignorant of the language, I was out of the question. Of the Spanish gentlemen, one was a cadet in the army, lively, sensible, high spirited, and of the noblest disposition; but being not fourteen years of age, he likewise was

rejected. The other gentleman, under whose wings the cadet travelled, was a Spaniard of a certain age, a captain in the army, and therefore accustomed to travel; of a grave deportment, and for integrity, worthy of the confidence which was to be reposed in him; but—(for in every character there is some but)—he was a bigot. Naturally austere, silent, and reserved, his religion taking its complexion from his temper, he became severe, morose, and seemed to cherish a cold indifference to all the comforts of this life both for himself, but more especially for his friends; yet in him all our suffrages met; he was to keep the purse, to pay all expenses, to render an account, which he did with the most exact fidelity, and to make provision for the journey, where provisions were to be procured; but this he neglected, although his coadjutor, the colonel's valet, was active, and always ready to run at his command to the butchery for flesh, to the baker's for bread, and to the vintner's to purchase wine. With a good look-out, we might have had hares, partridges, rabbits, and poultry in abundance; whereas by neglect, before we reached Madrid, we were half starved; and yet our journey cost much more, than with good management would have made us comfortable.

In the morning, when we were ready to leave Uset, this was the manner of discharging the account: the mistress of the house, supported by some female, made her approach at first with a low voice and with a modest air. The captain, supported by his colonel, who upon occasion could look very fierce, repelled the charge, and exclaimed against the exorbitancy of the demand. The mistress appealing to the maid, who was prepared to defend her moderation, by degrees raised her

voice, and became violent almost to fury. The captain sputtered, and the colonel sometimes put in a word to allay the storm, whilst the cadet stood laughing at a distance, till at the end of about twenty minutes the storm suddenly subsided, the landlady looked placid, and quietly accepted one-half of the original demand. If in the outset, our captain had asked for the *arancel*, all this trouble had been saved, because every publican is obliged to have one hung up in his house, and in that the price of every article, with the *ruido de la casa* (noise of the house) and beds is fixed by the magistrate.

This business being ended, every one took his corner in the coach, the coachman clacked his heavy whip, and the moment we began to move, the cadet, looking upon his mentor, crossed himself.

Our way lay across an extensive plain, bounded by distant hills, in which the soil, is sand and gravel, covering a limestone rock. The ascent to these hills is very easy, and the hills themselves are susceptible of cultivation; yet they are desolate, and for miles discover neither house nor tree, except the juniper.

At eleven in the morning we arrived at *Tortuera*, having travelled four leagues to dinner. This little village, the mansion of wretchedness and misery, is built upon a rock of *marble*, such as would not disgrace a palace. The sun was shining very bright; not a cloud was to be seen; yet these poor peasants filled the church, each with his lighted taper, prepared to join in a procession.

The ploughs of this district, are much degenerated from the perfection of those at Barcelona. The handle, the share, and the share iron, all pass through one mortise in the beam, which is made crooked

for that purpose. All these are fastened by a wedge. It is scarcely possible to see a rougher implement, without coulter, fin sheets, or mould board; but instead of this, two pins, one on each side, driven into the heel of the share.

All the way over the mountains, till you come near to Anchuela, the limestone prevails, charged with fossil shells, such as oysters, entrochi, and belemnites, with terebratulæ and chamæ. A little to the south of this, near Molina, on the mountains between the Xiloca, which goes into the Ebro, and the Gallo, which joins the Tagus, under the limestone they find a red gypsum, containing also fossil shells. It is remarkable, that this gypsum, decomposing and losing its vitriolic acid, crystallises in hexagonal prisms of a red colour; of these I collected many of different sizes, which ferment with the nitrous acid.

All the way over these desert mountains, with their interposing valleys, not one object presents itself to cheer the weary traveller; no house, no tree, except the savin, the juniper, and a species of cedar, which is peculiar to this country; but from time to time a monumental cross reminds him of mortality

We, indeed, had little cause to fear, because we were well armed, excepting when we chose to walk, and to leave the coach behind us. Some officers who passed this way, being at a distance from their carriage, in which, little suspecting danger, they had left their swords, upon entering a wood, were suddenly attacked and robbed by a banditti, who immediately escaped into the thicket, and were seen no more. One morning, when we had walked before the carriage, and I had got the lead, fearful of being too far a-head,

I looked back from time to time, taking care never to be out of sight of our captain, who was following at a distance; but finding myself entering upon a forest, I shortened sail, and recollecting the story of the officers, I turned oftner than usual to look behind me, when suddenly, having lost sight of my companion, I soon discovered him again, but out of the road, and running very fast. Not being able to imagine why he ran, whether he had missed the way, or whether he was escaping for his life, I pursued him over the hills, and through the bottoms, where it was not possible to know which way I should direct my course to catch him, till I had the happiness, to see him stop. When I came up to him, I found that our cadet had wandered from the way, and had taken another road. Fortunately for him, his good mentor saw him, pursued him, and brought him back again. When we were thus together, all my apprehensions vanished, and we leisurely returned into the road which we had quitted; but here a new perplexity arose; for, from the summit of a hill, which had a commanding prospect, we could see nothing of the coach, nor could we determine if it were before us, or behind us. At last, not being able to discover the track of the wheels, we walked half way back to the village from which we had departed, where we found the coach sticking in the mire, and some peasants engaged with their implements, working hard to set it free.

The country contiguous to Anchuela, compared with the uncultivated mountains of Arragon, appears a Paradise. The limestone rock is covered with a deeper soil, and the little hills are cultivated

to their summits; yet Anchuela is a most miserable village, and in the posada there is only one room, with two filthy beds. When beds are wanting, officers use their privilege, and are billetted by the alcaldé on some private family.

In walking out to view the country, I found on the ploughed land, abundance of cockle-shells and cardias.

The plough is precisely the same as that last described. An English mechanic will not readily conceive how a plough can be made, not only without coulter, drock, ground-wrist, and mould-board, but without any sheets to support the handle and the share. To construct such a plough would puzzle their invention; yet nothing can be more simple, for the beam itself being curved, supplies the place of sheets.

In leaving Anchuela, Tuesday, May 16, we sent the carriage forward, and walked by a much nearer way to meet it, winding through a valley which is shut in by swelling hills, and directing our course by a rivulet, whose waters are as clear as crystal. The sides of these hills are shaded with savin, juniper, and the ulex europæus.

This would be a beautiful situation for a nobleman's seat; here he would have plenty of wood and water, with corn, and wine, and oil, in great abundance, whilst the money which he spent in the maintenance of a great establishment, circulating among his tenants, would cherish their industry, and animate the whole country for many miles around him.

Throughout the whole of Spain I cannot recollect to have seen a single country residence, like those which every where abound in England.

The great nobility surround the sovereign, and are attracted by the court; the nobles of inferior rank or fortune, are either assembled at Madrid, or establish themselves in the great cities of the distant provinces. This desertion of the country has arisen, not as in other kingdoms, from the oppression of the great barons, and from the franchises enjoyed by cities, but from two other causes more extensive in their operation. The first of these was the distracted condition of the empire till the reign of Ferdinand and Isabella, divided into separate kingdoms of small extent, all engaged in never-ceasing wars against each other, which drove men of property into the cities; the second was the jealousy of the court, which soon followed the expulsion of the Moors; a jealousy which for more than a century and a half was merely political, lest the grandees, supported by the people, should endeavour to regain their consequence. To this fear, at the accession of the present family, succeeded one of a more alarming nature; from the attachment which many of the great families had discovered to the house of Austria. For this reason they were assembled round the throne, and kept constantly in sight. The condition of the French is certainly better, and some inhabited castles are to be found in every province. But, in this respect, no country can be compared to England. If the causes were to be assigned for this equal dissemination of wealth, which appears in the delightful mansions of the great, and the seats of country gentlemen, scattered over the face of the whole island; or that which is to be seen in all our cities, great towns, and even country villages; which meets the eye in every farm-house, and which shews itself in the high state of cultivation, in our

agricultural improvements, in the flocks, the herds, and the luxuriant crops with which our fields are covered, the leading cause would probably be found in the constitution of our government, not merely as securing life, liberty, and property, but as making it necessary for the first nobility to cultivate their interest in the country, if they will preserve their influence at court. By residing on their own estates, they not only spend money among their tenants, which, by its circulation, sets every thing in motion, and becomes productive of new wealth, but their amusement is to make improvements. By planting, draining, and breaking up lands, which would have remained unprofitable, they try new experiments, which their tenants could not afford, and which, if successful, are soon adopted by their neighbours; they introduce the best breed of cattle, the best implements of husbandry, and the best mode of agriculture; they excite emulation, they promote the mending of the roads, and they secure good police in the villages around them; being present, they prevent their tenants from being plundered by their stewards; they encourage those who are sober, diligent, and skilful; and they get rid of those who would impoverish their estates. Their farmers too, finding a ready market for the produce of the soil, become rich, increase their stock, and, by their growing wealth, make the land more productive than it was before; nay, their tradesmen, when they get money, which is not wanted to increase their peculiar stock, either lend it to the farmer, or themselves purchase land, and bury their treasures in the earth; yet, not like that which is hid by the miserable slaves of a despotic government, to remain unprofitable, but to produce, some thirty, some sixty, and some an hundred fold.

The country which we passed over between Anchuela and Maranchon, in its appearance, and in its calcareous rock, resembles that which is about Atford, in the road from London to Bath, or rather like that which is round Keynsham, between Bath and Bristol.

Maranchon, remarkable, like other villages around it, for the poetic fire of its inhabitants, is a little village, situated on a declivity, sheltered from the north by high limestone rocks, but open to the south, and looking down upon the rich valley by which it is fed. The soil is dissolved limestone, with sand and clay, forming a most fertile marle. At this season it is all alive; I counted forty ploughs at work, all employed in preparing for their peas,

Having observed the resemblance between this country and that which is to the east and to the west of Bath, I felt a peculiar pleasure in picking up on the ploughed land, belemnites, cockles, and cardias, with other bivalves, and fragments of the oolite, of the same species and of the same colour with those which I had formerly collected at Atford, Wraxal, and on the adjacent hills.

After dinner we left Maranchon and, in about three or four miles, lost the limestone, which was succeeded by silicious grit of a peculiar texture, somewhat like bran. This, however, did not continue, for at *Aguilarejo*, we passed between two high rocks of fine grit, or sand stone, very white, with the strata inclined to the horizon, in the angle of forty-five degrees. The country we passed over between these two miserable villages, after quitting the rich valley of Maranchon, is little cultivated, and excepting two woods, the one of oak, the other of ilex, is naked and unprofitable, although these woods shew sufficiently what the country could produce.

Near to Aguilarejo the crops of wheat appear half-starved, and the fields are covered with a species of ranunculus.

This day we saw five monumental crosses; one coming out of a wood, one at a place where four ways met, the rest on the summits of the hills, from whence the robbers could see every thing that was passing on the road, and know which way to escape.

We slept at *Alcolea*, having travelled, according the *Guia de Caminos*, only six leagues and a half since three in the morning. I should conceive that the leagues here, like the miles in distant provinces with us, are longer than the legal measure.

The country about Alcolea is covered with corn, excepting only some few hills, which, shaded by the ilex and the juniper, present a never-failing verdure.

As we proceeded, ascending among the hills, at the distance of a few miles from Alcolea, culture ceases, and the country is abandoned to the ilex, the ulex europæus, and the quercus coccifera, these last diminutive, but the first respectable.

The roads are here most detestable. The Spanish nation is tenacious of its freedom from the *Corvé*; but this appears to me bad policy. After feeding the peasant, who cultivates the soil, the first surplus of revenue should be applied in making roads to carry the crops to market. Farmers, if left to themselves, will never pay attention, nor expend their money, their labour, and their time, on this most important object; and in Spain, the gentlemen of landed property, being confined wholly to the cities, neither feel the want of roads, nor see their interest concerned in having them repaired. It is the

landlord in every country who ultimately bears this expense, and it is he who principally reaps the benefit.

As we approach *Algora*, the silicious grit, or sand stone, which has continued all the way from Aguilarejo, gives place to limestone, charged with fossil shells.

In this village, the church is the only object which can give pleasure; it is very pretty.

Beyond this, the country becomes inclosed with limestone fences; but although inclosed, it seems to be left uncultivated, covered in general with stones, and abounding with oak, ilex, juniper, the ulex europæus, the lavendula spica, the common thyme, and the genista.

Here, for the first time since we left Barcelona, we saw horned cattle feeding.

We passed by three monumental crosses, all at the junction of four ways. In a country where few people travel, a thief has little chance of passengers, unless where two ways cross.

As we drew near to *Grajanejos*, we travelled over an extensive plain of open field land, well cleared, and all in corn, bounded by a forest of the most luxuriant ilex, through which we passed, not without circumspection as we entered, and when we were about to quit it.

Grajanejos is built upon a rock of limestone, looking perpendicularly down upon a fertile little vale, above which it is elevated more than three hundred feet. The situation is romantic, and the valley has the appearance of a ravine.

They have here no beef. Mutton is eleven quarts, or a fraction more than three pence per pound, of sixteen ounces. Bread three

quarts and a half, or one penny nearly. Labour is four reals, or less than ten pence a day.

In conversing with the *padre cura*, that is, with the rector, I learnt that he had sixty houses in his parish, two hundred and forty communicants, beside one hundred children under the communicating age, which is eight. All above this age are compelled to confess, and to receive the sacrament. His living is worth eight hundred ducats per annum; a considerable benefice for Spain, being equal to eighty-seven pounds, seventeen shillings, and eight pence, sterling.

May 18. From Grajanejos, we crossed an extensive plain, and passing through a forest of ilex, entered upon a level country, in which for many miles, we saw neither tree, nor house, nor any token of human existence, except one monumental cross. But after this, as we got within the influence of Guadalajara, we met with flocks of sheep, good corn, and sandy banks covered with vines, which to us had all the charms of novelty. Descending to a lower level, we discovered a vast expanse before us, bounded by snowy mountains to the north. In this fertile vale, plenty seems to have established her dominion, and to be constantly replenishing her horn, with corn, and wine, and oil.

Guadalajara is divided into ten parishes, and is said to contain sixteen thousand souls, with fourteen convents. It is rendered famous by the royal manufacture of broad cloth, and is remarkable for the species of cloth made of the Vigogna wool. Here the king employs near four thousand people, to whom he pays monthly, six hundred thousand reals, or six thousand pounds, besides about forty thousand spinners scattered in the surrounding villages.

This manufacture was first projected by the Baron de Riperda, A. D. 1720, who brought workmen from Holland, but with very ill success; and Don Joseph De Carvajal, prime minister to Philip V. who attempted the same at S. Fernando, had in his day little more to boast of. During the war of 1740, the English government, with a view to distress the Spaniards, having prohibited the importation of their wool, the sudden stagnation had for the moment the effect desired; but new channels were soon opened, fresh markets were discovered, and the price of wool was considerably raised. To prevent such stagnation for the future, Mr. Wall, then in England, decoyed one Thomas Bevan, a skilful workman, from the town of Melksham, in Wiltshire, with many others, and established them at Guadalajara, where they contributed to raise the credit of an expiring manufacture. Some years after this, Thomas Bevan, having met with ill usage, died of a broken heart; and in him, this undertaking suffered an irreparable loss.

The conduct of the English, in refusing to purchase of their enemies, this profitable article of commerce, reminds me of a measure equally politic adopted by the Spaniards with the same views and on a similar occasion, when, during the *war of the succession*, they prohibited the sale of their wines, oil, and fruits, to the English and the Dutch.

A. D. 1755, government finding it impossible to derive a profit from this declining manufacture, delivered it over, together with the similar one established at S. Fernando, to the *Gremois*; but after a few years (A. D. 1768) the king once more undertook to manage both on his own account, and soon removed the sister manufacture from her former abode

to *Brihuega*, still permitting her to retain the name of S. *Fernando*, as being well known and much honoured in the market.

If we may believe Ustariz, the infant undertaking, in his day, swallowed up the whole of the provincial revenue, and yet was constantly in debt. This we may readily believe; because if any individual were to conduct such an extensive manufacture on his own account, supposing him not to have been previously instructed in the business, although he should have been bred to trade, he would lose his money; a private gentleman would lose more, a sovereign most.

Considering what salaries must be paid, how little scope for diligence and parsimony, how much for negligence and rapine, and how very weak the inducement to excel, a sovereign can have no reasonable hope to multiply his gains. If he is to force a trade and to establish a monopoly by the exertion of supreme authority, all these evils will increase against him, and the illicit trader will meet him to advantage. If he is fairly to stand a competition, the private tradesman, too active and too zealous for the sovereign, will seek out new markets, and by attentions, by civility, by acts of friendship, and by barter or reciprocal exchanges, gain the preference, whilst the sovereign, unless he sinks the price, will remain with his commodity unsold. Should the price be sunk low enough to force a market, the loss must be considerable, and no manufacturer will be able to rise up against the sovereign, whose capital is inexhaustible, or to stand the competition with him, who can afford to suffer loss without fear of bankruptcy.

Ustariz condemns all such establishments, and writes a chapter to

prove, "Que las fabricas de quenta de los soberaños no florecen;" that manufactures on the sovereign's account can never prosper. Count Campomanes cannot approve them: the principles which this able statesman labours to establish, have all much higher views, and lay a more certain foundation for national prosperity. His principles are applicable to every nation, whether rich or poor. He would, in the first place, diffuse knowledge by free-schools; under the conduct of the best masters, to teach drawing, mechanics, mathematics, chemistry, agriculture, and languages, with the theory of commerce, and of political œconomy; he would promote justice and sobriety, diligence and œconomy; he would encourage public spirit, and œconomical societies; he would send young men, properly qualified, to travel, for the purpose of inspecting all the modern improvements in arts, manufactures, and commerce, adopted by more polished nations; he would render communication easy, by means of roads and canals; he would regulate the posts, and establish banks; he would provide plenty of fuel for manufactures, as being essential to their existence; he would honour the mechanic, the manufacturer, and the merchant; he condemns all monopolies, and all corporation privileges, as partial, oppressive, useless, and unjust; he would encourage strangers, and make naturalization easy to them; he would diminish the number of festivals, prevent the abuse of monastic institutions, encourage industry in convents, and employ in some profitable labour all who are confined in prisons; he would construct good harbours, quays, and wharfs, and cause sea charts to be formed with the most minute attention. To these wise regulations, recommended by that able politician, if

we might venture to suggest any additional provisions, they might be these few; suffer the demand for money to regulate the rate of interest; encourage insurance among merchants and manufacturers; tolerate all religions; protect persons and property from regal tyranny by civil liberty, and from private violence by wise laws, enforced by an active and vigilant police; make commerce free, and live in peace. With these provisions, there could be no occasion for the sovereign to be a manufacturer, much less would he have any inducement to become the chief monopolist. These provisions not having been adopted by the Spanish government, the manufacturers of other nations can purchase the raw material, pay freight, charges, and heavy duties, and importing them into Spain, make considerable profits where the monarch suffers loss.

From Guadalajara to Alcala is four leagues. This city, watered by the Henares, and fed by a fertile and most extensive plain, is one of the prettiest in Spain. The buildings are of *granite*, of limestone, and of brick, and the pavement is of smooth round stones, mostly silicious, all the spoils of distant mountains. The Archbishop of Toledo has a palace here, the work of Covarrubias and Berruguete; in one front of which are eighty-two pillars, in the other fifty-two. The churches are thirty-eight, the colleges nineteen. One of these I visited with peculiar pleasure, as may be readily conceived, when I say that it was founded by Cardinal Ximenes. The library is well furnished; the books are excellent and well arranged. Among these the original Complutensian Bible must command for ever the grateful remembrance of the christian world. In this apartment are preserved

his letters, his ring, his bust, and his picture; but these, though beautiful, faintly express the greatness of his mind, and the goodness of his heart.

From Alcala to Madrid is six leagues, in which space three rivers, the Henares, the Jarama, and the Manzanares, diffuse their fertilizing streams over a vast expanse of level country, by which considerable cities, together with the capital, are fed.

The approach to this from Alcala is beyond description beautiful. The road is spacious, and the gate is elegant. On the left we look into the garden of the ancient palace, called Buen Retiro, with the botanical garden and the extensive alleys of the Prado, well planted and adorned with numerous fountains. On the right, through the trees, we catch a glimpse of another gate, whilst the wide street of Alcala, stretching gracefully before us, and bending in the line of beauty, contracts, as it advances up a gentle hill, thus discovering at one view some of the most considerable of the public buildings, and the habitations, either of the first nobility or of the foreign ministers.

In this street is the *Cruz de Malta*, a large hotel, to which we drove, and where for the night, after my companions were dispersed, I took up my abode in solitude, with the reflection, painful for the moment, that I was come to my journey's end. It had been wearisome, and not altogether free from dangerous accidents and disagreeable adventures; but then, with an object constantly in view, every thing may be endured. Besides, in these fourteen days, I had got acquainted with my fellow-travellers, and for the cadet had contracted friendship and esteem.

Even for the others, whilst thus united by one common interest, I felt regard; but now that our journey was at an end, the idea of dispersing, to meet no more, left a gloom which solitude was ill suited to relieve. At the end of a pursuit a vacuum succeeds, which must be painful till some new, some interesting object is in view, and gives fresh occupation to the mind.

On this occasion, I amused myself with reflections on the feelings of the ten thousand Greeks, when, having surmounted all their difficulties, and arriving safe in Greece, they immediately dispersed to go in search of new adventures. What misery must be their's, whose views in life are closed. This appears to be the chief source of wretchedness in cloisters, where little scope is left for either hope or fear.

Before we parted, we had to settle our accounts.

The coach, with two coachmen and seven mules, cost us by agreement thirty-five pistoles, or twenty guineas; and as a gratuity, we gave the men six pistoles, equal to three pounds, twelve shillings. The expense upon the road for diet was eleven hundred and forty reals. The sum total, therefore, of our expenditure was six and thirty pounds; which for a journey of a hundred Spanish leagues, accomplished in fourteen days, must be considered moderate.

MADRID.

As the court was absent from Madrid on my arrival, all my letters were for the present useless, excepting one from M. Sage, of Paris, to Don Casimir Ortega, who, as botanical professor, is well known to all the lovers of that science. I had indeed a letter to a grandee of Spain, then at Madrid, with the strongest recommendation, and from him I had expected much; but I was disappointed in my hopes. I found him polite, but cold; sensible and well informed, but silent and reserved; universally esteemed for the goodness of his heart, but so perfectly absorbed in the formal duties of religion, that I could derive no advantage from his friendship. In a word, he appears to be one of those to whom the Italian proverb may with justice be applied, *Tanto buon che val niente: so good that he is good for nothing.*

In Don Casimir Ortega I found the activity of friendship, and every possible attention. By his permission I had access at all hours to the botanic garden. This well-chosen spot being upon a declivity, inclined towards the Pardo, and separated from it by iron rails. Whether you are walking or riding in that shady grove, refreshed by its numerous fountains, and unmolested even by the mid-day sun, you may at one view command the whole of it. In this spacious and well furnished garden, I frequently amused myself in renewing my acquaintance with a science which I had formerly studied with delight; and whenever the

professor gave lectures to his pupils, I constantly attended. My first elements I had learned under Doctor Hope, who, as a botanist had acquired fame; but I must confess, that the method of Ortega appeared to me superior; and I am persuaded that his pupils with moderate abilities, cannot fail to be proficients in this science.

He not only expects them to come prepared, and able to investigate each plant, so as to trace it from class to order, genus, species, and variety, but he teaches them, to draw up generic descriptions for themselves.

The merit of the master will soon appear in the productions of his pupils, who with M. Dombey, have travelled over Spanish America, and are preparing to favour the world with their discoveries.

Such a pursuit, in the absence of the court, proved an agreeable resource, and with the library of the Carmelites, helped to occupy my attention in both a pleasing and profitable manner.

At intervals, I walked about the town to obtain a general idea of it, before I descended to particulars. In my own mind, I divided the whole into three portions, corresponding to three periods, easy to be distinguished. The most ancient is nearest to the river Manzanares, with narrow and contracted streets, crooked lanes, and blind alleys, like those still visible in London, but more especially in Paris, where no extensive conflagration hath consumed the rude monuments of art, erected by the remote progenitors who inhabited the infant city. To the north and to the east of this, as you remove farther from the river, the streets are wider, and the buildings affect some degree of symmetry. This portion includes the *Plaza Mayor*, or square, which

in its day must have been a striking object, and terminates at the *Puerta del Sol.* But when Philip II. removed here with his court, and Madrid became the capital of his vast empire, the great nobility erected palaces beyond the former limits, and the *Puerta del Sol* is now the centre of the whole.

It is curious to trace the origin of cities. The shepherd pitches his tent, or builds his mud-wall cottage by the river side, because he cannot afford to sink a well; but man, being a gregarious animal, others, for the comfort of society, or for mutual protection, resort to the same spot, and build as near to him as possible. Cottages increase, tillage succeeds, manufactures follow, and the inhabitants, advancing both in number and in wealth, wish to enlarge their habitations; but, the ground being occupied, they have no other choice but to raise their houses higher. Whilst inhabiting the humble cottage, they never complained for want of light or air; but now that they exclude each other's light, they wonder that their ancestors should thus have crampt themselves for want of room.

Madrid has fifteen parishes, seven thousand three hundred and ninety-eight houses, thirty-two thousand seven hundred and forty-five families, and one hundred and forty-seven thousand five hundred and forty-three individuals, sixty-six convents, sixteen colleges, eighteen hospitals, five prisons, and fifteen gates built of granite, most of which are elegant. The principal arch of the Puerta de Alcala is seventy feet high, and the two lateral ones are thirty-four, all well proportioned. It is by Sabatini, and does credit to his taste.

In looking for good pictures, I began with *los Carmelitas descalzos*, taking for my guide the excellent works of Antonio Ponz, and of Raphael Mengs. In the sacristy are found some works of the best masters, of Titian, Vandyke, Rembrandt, *Coello*, *Ribera*, Jordan, *Murillo* *Zurbaran*, and of Andrè Vacaro. The claustre is by *Velazquez*.

The church and convent of *S. Francisco de Sales*, were built in the reign of Ferdinand VI. and here we see his monument, by Sabatini, with that of his queen, Barbara of Portugal. The dome and the arches were painted by the three brothers *Velazquez*. The great altar has six Corinthian pillars of green marble, like the verde antique, from Sierra Nevada, near Granada, of single blocks, each seventeen feet high; the base of the capitals are brass gilt. There are some tolerable pictures by Francis de Muro, and Cignaroli. The treasures of this convent are considerable.

The church of S. Pasqual has the Visitation, by Jordano; St. Stephen, by Vandyke; Christ scourged, by Alexander Veronese; a Pope, by Titian; a Holy Family, by Leonardo da Vinci; Pope Gregory, St. Ignatius Loyola, and F. Xavier, by Guercino; the Adoration, by Paul Veronese; John beheaded, by Mich. Angelo Caravaggio; and five others, by *Ribera*.

The church of *S. Isidro*, which belonged formerly to the Jesuits, strongly marks the character of that society, not only by its size, but by the taste which appears both in the building and its ornaments. In my opinion it is the most elegant of any I have seen since I left Zaragoza.

The pictures, although not of the first masters, are yet not to be despised.

The great church of *S. Francisco* is admired by the best judges; but to me the vast dome and the Grecian arches, wholly destitute of ornaments, appear unfinished, naked, cold, and void of taste.

The day after my arrival, near the Puerta del Sol, looking for the *Calle de la Montera*, without Spanish enough to inquire the way, a gentleman who saw my difficulty, spoke to me in English, and desired to know what street I wanted. Upon being informed, he conducted me to the house where I was going, and when he took his leave, invited me to dine with him. This gentleman was Don Francisco Escarano, one of the postmasters general, who, in return for civilities received in this country, when he was secretary to the embassy, thinks he can never do too much for any Englishman who needs his assistance. Not satisfied with thus marking his attention, he conducted me to the king's palaces at Madrid; and, as long as I remained in Spain, he never lost an opportunity of rendering me substantial services.

The palace of the *Buen Retiro* is a vast pile of buildings, very ancient, long deserted, and, when I saw it, verging to decay. It contains some spacious apartments, in which there still remain some few good pictures, but the three things which gave me most satisfaction were, the theatre, the great saloon, and the equestrian statue of Philip IV. This statue, cast by Pedro Tacca, of Florence, and said to weigh nine tons, is supported by the hind legs alone. I never saw nor can conceive any thing more perfect, or which appears so animated, as this prodigy of art.

The theatre is vast, and opens into the gardens, so as to make them, upon occasion, a continuation of the scene. Here Ferdinand VI. frequently amused the public with operas, of which his queen was extravagantly fond.

The great saloon, called *el Cason*, with its antichamber, painted in fresco by Luca Jordano, remains a monument of his taste, invention, judgment, and imitative powers. In the principal compartiment of the roof is represented Hercules giving the golden fleece to Philip the Good, Duke of Burgundy; in a subordinate compartiment, Pallas and the Gods are seen subduing the Titans; answering to this, the majesty of Spain appears ruling the terrestrial globe. The rest is filled up with allegorical figures, finely expressed. The antichamber contains the Conquest of Granada. From the great saloon we go to the garden, by a little oval cabinet, covered entirely with looking-glass, in the ceiling of which is represented the Birth of the Sun, with people of all nations worshipping the rising deity, whilst the priests are engaged in offering sacrifices. This likewise is by Jordano.

I saw one apartment, which is seldom shewn to foreigners, containing models of strong places; among these the two most striking are Cadiz and Gibraltar.

The gardens of this palace are extensive, and have a pleasing variety of wood and water. Had I been to fix upon a situation for the royal residence, I should have chosen this in preference to that in which the new palace stands, but there may be, perhaps, objections which do not present themselves to the transient observer.

The palace called *Casa del Campo* has few things worthy of attention. Here is an equestrian statue of Philip III. begun by Juan Bologna, and, after his death, finished by Tacca his disciple; it resembles that of Henry IV. at Paris. Here also is the original of the famous Temptation of St. Anthony, by Calot.

It is impossible to view the new palace without the most exquisite delight. It presents four fronts, each of four hundred and seventy feet in length, and one hundred feet in height up to the cornice, inclosing a quadrangle of one hundred and forty feet. These fronts are relieved by numerous pillars and pilastres, and over the cornice is a balustrade to hide the leaden roof. The height of the north front is considerably above the others, exhibiting five stories, besides the entresols and under-ground apartments.

With the balustrade, on pedestals, are placed a series of the kings of Spain, from Ataulfo to Fernando VI. The plan is somewhat singular. On the principal floor is a suit of apartments, large and elegant, which communicate all round the palace, receiving light from the fronts, and inclosing rooms for the domestics, which have light from a spacious gallery within. This gallery runs all round the quadrangle, over an open portico, or piazza, and is covered by a terrace. The foundation of this edifice was laid in the year 1737, three years after the old palace had been consumed by fire; and to prevent the like accident in future, the whole is upon arches.

The most striking feature in this palace is the audience chamber, sallon de los reynos, which is a double cube of ninety feet, hung with crimson velvet, and which, with its sumptuous canopy, and painted roof, makes a most magnificent appearance.

The paintings of the ceilings are by Tiepolo, Giacuinto, Bayeu, Velasquez, Maella, and Mengs. It is not possible to view the Apotheosis of Hercules, in the hall of conversation, and of Trajan, in the king's dining room, without feeling singular pleasure and delight. In the execution of these pieces, Mengs exerted all his powers, and seems to have found no difficulty in executing what his imagination had conceived. Ease and elegance every where prevail. In these two delightful subjects, we cannot readily determine which we should most admire, his designs, his lights and shades, his colouring, his invention, or his composition; for here he seems equally to deserve praise for all: he wants however, in my opinion, that expression in which his favorite Raphael excelled.

It would be unpardonable to pass over this superb collection of pictures, without some kind of detail. I shall therefore begin with the king's apartments:

In his antichamber there is, by

Basan, an Adam; a Noah; Orpheus; and six others.

Paul Veronese, Adonis sleeping.

Rubens, four of Hercules; one of Philip III.

Tintoret, Judith and Holophernes; St. Ursula martyred.

Titian, Sisyphus; Prometheus; three of Venus; and Adam and Eve.

Velasquez, Philip III. Philip IV. their two wives, and Olivares, all on horseback. I doubt whether five such horses, so perfect, and so full of animation; were ever seen together; the horse of Philip IV. rises from the canvas, and seems so much like real life, that if properly

placed, I am persuaded an acute eye might be easily deceived.

In the king's conversatian room, into which he retires with the foreign ministers the moment he has dined, there are, by

Titian, Charles V. on horseback; Philip II. Europa; Adonis.

Vandyke, Don Fernando.

Velasquez, Donna Maria de Austria.

In the king's dressing room, by

Guido, an Assumption.

Luca Jordano, Isaac; Flight into Egypt.

Mengs, a Nativity.

Murillo, the Annunciation; the Virgin and Joseph; a Sacred Family, Jesus and John, as infants.

Ribera, Elspagnoleto, the Virgin and Mary Magdalen; John the Baptist.

Velasquez, Argos; Vulcan at his forge, with the Cyclops and others. Some by *Teniers* and by *Titian*

In the king's private cabinet are more than twenty of *Teniers*, and one of *Woverman*.

In the antichamber of his bed-room is a Holy Family, by *Jordano*, and one by *Mengs*.

In his bed-chamber are eight by *Mengs*, among which are, the Agony in the Garden; the Taking down from the Cross; and Christ appearing to Mary.

In the first apartment of the Infanta, there are many by *Jordano* and *Lanfranc*; two children, by *Guido*; Virtue and Vice, by *Paul Veronese*; a portrait, by *Vandyke*; and two beautiful Cattle Pieces, by *Velasquez*.

In the second antichamber are, by

Carlo Maratti, two women with flowers.

Jordano, Jacob and Esau; Bathsheeba.

Lancfranc, two pieces.

Titian, St. Margaret.

In her dining-room there are nineteen by *Jordano*.

In her great hall there are, by

Jordano, four, taken from the History of Solomon.

Rubens, a Priest; a Dance, and one more.

Titian, Charles V. and Philip II.

Velasquez, four pictures of distinguished merit.

In her bed-room, Peter in Prison, by *Guercino;* St. Anthony of Padua adoring the Child Jesus, by *Carlo Marat;* and the Seizing of our Lord, by *Vandyke*.

In the apartments of the prince and princess, are seven pieces by *Jordano*; the Child Jesus disputing with the Doctors in the Temple, by *Paul Veronese*.

Of *Rubens*, the Rape of Ganimede; Marsias and Apollo; the Centaur in a robe of the wife of Perithous; Saturn; Apollo; Narcissus; the Holy Children.

In their cabinet there are, by

Albert Durer, his own Portrait, and the Death of the Virgin.

Basan, The Adoration of the Kings; the Nativity; and, the Agony in the Garden.

Corregio, Christ clothed by his Mother; and Christ praying in the Garden.

Leonardo de Vinci, the Holy Children playing with a lamb, and one more.

Paul Veronese, Moses taken up by Pharaoh's daughter.

Poussin, a Landscape.

Raphael, a Holy Family; and a Virgin with her Son.

Rubens, two Landscapes; four heads; and six small pictures.

Titian, Children playing round a statue of Venus; and a Bacchanal with a Woman sleeping; both astonishingly fine. Rubens copied these, or rather if the expression may be allowed, he translated them into Flemish. The thoughts remain, but the ease and the elegance are lost. Surely nothing ever equalled the originals; the eye is never tired of viewing them.

In the prince's dressing room are, by

Andrea Sacchi the Nativity of the Virgin.

Andrea Vacaro, five pictures of St. Cayatan.

Jordano, a Conception; and the Death of the Virgin.

Espanoleto, or Joseph Ribera, sometimes called El Spagnoleto, Magdalen; St. Benito; St. Geronimo; and St. Bartholomew.

Mengs, a Nativity.

Murillo, a Holy Family.

Rubens, a Virgin and Child.

Titian, Ecce Homo; and a Stabat Mater Dolorosa.

Vandyke, a Magdalen; and two of St. Rosalia.

Velasquez, a Landscape with two hermits.

In their dining room there are by

Brughel, some good pictures.

Espanoleto, a Conjurer.

Coypel, Susanna accused by the Elders.

Paul Veronese, a Susanna.

Rubens, Achilles discovered by Ulysses.
Tintoret, Judith and Holofernes.
Titian, seven pictures.
Vandyke, a Woman.
Velasquez, the Marquis of Pescara
Woverman, Landscapes.

In the apartment of the Infant Don Gabriel, there are seven pieces by *Jordano*; three by *Espanoleto*, and a Charles V. by *Titian*.

In the apartment of Don Antonio there are three by *Jordano*.

In the apartment of the Infant Don Louis were, by
Guido, Jesus bearing his Cross.
Paul Veronese, Eleazer and Rachael.
Rubens, St. George and the Dragon; the Centaurs; Progne giving to Tereus his son, Itis to eat; Diana; Archimedes; Mercury; Hercules and the Hydra; Apollo and Pan; the Rape of Proserpine: the two copies from Titian, before mentioned, of the Bacchanals, and of the Children playing round the statue of Venus. Had the originals been lost, these would have been much admired.
Vandyke, the Infant Don Fernando; and some others.

What has been said, may serve to give a faint idea of this inestimable collection; in viewing which, this observation naturally presents itself, that as far as relates to imitation of nature, the Spanish painters are not behind the first masters of Italy and Flanders; whereas, in point of light and shade, and what has been called aereal perspective, which is only the modification of these, *Velasquez* leaves all other painters far behind him.

Joining to the palace is a house called Casa de Reveque, in which are shut up the following pictures: by *Guido*, Hippomanes and Atalanta; by *Annibal Carrachi*, a Venus with Adonis and Cupid; by *Paul Veronese*, the same subject, a smaller size; and by *Titian*, five pictures, in each of which is a naked Venus.

By *Rubens*, the Rape of the Sabines; Diana bathing; a Bacchanal; a Perseus and Andromeda; Juno, Pallas, and Venus, all full size.

Near to this is the royal armoury, which is well arranged; the armour is ancient, yet very bright, and well preserved; it is an epitome of Spanish history. The most conspicuously placed is the armour of Montezuma.

When I had in some measure satisfied my curiosity in viewing the pictures, I began to turn my attention towards the manufactures; but more especially to that of nitre, or saltpetre, which in this city, has employed some thousands of the inhabitants in summer, and many hundreds in the winter.

In my way to this, on Saturday, May 27, passing through the gate of St. Barbara, I visited the tapestry manufactory, which equals in beauty, the gobelins, from whence it originally came. I found a Frenchman at the head of it, who was civil and communicative. This fabric was brought into Spain, and established here, under the direction of John de Van Dergoten, from Antwerp, in the year 1720. They now employ fourscore hands, and work only on the king's account, and for his palaces, making and repairing all the tapestry and carpets, which are wanted at any of the *Sitios*, or royal residences.

Every one knows the method of working tapestry; that the chain is perpendicular, the harness over their heads, and the picture by which they work behind them, that they work with bobbins, and press down the thread with a little ivory comb.

In making their carpets, they have three coarse-spun threads lightly twisted together, which they weave into the chain with their fingers, so as to tie, and then cut off the thread about a quarter of an inch in length. This they find to be much better than the ancient method of weaving on the cutting knife, and their work, they say, is considerably stronger.

From thence I proceeded to the saltpetre works, where at every step I was confounded, and at a loss which to admire most, the wisdom of the Creator, and the secret paths in which he is constantly proceeding, or the folly of the minister, who established this manufacture at Madrid.

The person from whom I took my information was a Frenchman, who found employment here because of his skill, acquired in other works of a nature similar to these.

I observed a large inclosure, with a number of mounts of about twenty feet high, at regular distances from each other. These he told me had been collected from the rubbish of the city, and the scrapings of the highways. I examined them with a minute attention, and found nothing remarkable, but small fragments of gypsum in great abundance; they had remained all the winter piled up in the manner in which I found them. At this time men were employed in wheeling them away, and spreading abroad the earth to the thickness

of about one foot, whilst others were turning what had been previously exposed to the influence of the sun and the air. He told me, that the preceding summers these heaps had been lixiviated, and that being thus exposed, they would yield the same quantity of salt again, and that, as far as he could judge, the produce would never fail; but that, after having been washed, no saltpetre could be obtained without a subsequent exposure. He thought Madrid on all accounts, improper for such a manufacture; and said, that from his own observations, he was inclined to think they could not make saltpetre for eight reals, that is, nearly twenty-pence a pound.

My curiosity was excited to the highest degree by this account, which seemed to offer violence to the most established principles of chemistry; I determined therefore to lose no opportunity of paying attention to this business, and with that view, procured an introduction to the gentlemen who had the direction and control of it. With them, I examined a much more extensive work at the gate *Atocha*, near the general hospital. They informed me, that the number of men employed, was commonly about fifteen hundred, but for some short intervals, near four thousand; this latter number agrees well enough with the Abbé Cavanilles, who states them at four thousand. According to their account, they have had this manufacture only a few years, and have now collected earth sufficient to last for ever. Some of this earth they can lixiviate once a year, some they have washed twenty times in the last seven years, and some they have subjected to this operation fifteen times in one year, judging always by their eye, when they may wash it to advantage, and by their taste

if it has yielded a lixivium of a proper strength. When it is too weak, they pass it over fresh earth till it is strong enough for boiling. Most of the earth they use is common earth, and they are of opinion that all the earth in the vicinity of Madrid contains some nitre. When the earth has been a proper time exposed, they put it into large earthen pans, ranged in a row, of the same form with those used by sugar-bakers to refine their sugars, being a cone inverted, with the apex truncated; at the bottom they put a bit of esparto matting covered with ashes, to prevent the earth from falling through; on this they keep pouring water as fast as it filters, till it will yield no more lixivium. As it filters it falls into a drain, which conducts it to a cistern; from whence it is pumped up into the furnaces, which are absurdly deep, and by a fierce fire, is evaporated sufficiently for the salt to crystallize. The salt thus obtained is a mixture of nitre and sea salt. To separate these, they use the common process. It is well known that muria, or sea salt, is soluble in three times its weight of water, either hot or cold; but nitre requires only one-sixth of its weight, if the water is boiling, whereas, if it is cold, the water must be six times the weight of nitre, to dissolve it perfectly. Hence it is evident, that on cooling, the nitre will be the first to crystallize; this however requires repeated operations before the nitre is thoroughly refined, and fit for market. The director and comptroller both assured me, that the saltpetre did not stand the king in more than two hundred reals a quintal, and that he sold it for five hundred, getting a clear profit of three hundred reals by every quintal which he made. They ought to know; but I suspect that in their calculation there is some mistake.

Not satisfied with this account of gains by a royal manufacture, and in such a situation, I went once more to examine some inferior officers, both in the upper and the lower works, at the two gates, S. Barbara and Atocha. I found some in each, who were sufficiently communicative; and this was the result of my inquiries: at the upper works, since the war, they have employed one hundred men in winter, and more than three hundred in the summer; they have four furnaces, and have made, upon the average, about four thousand arrobas of refined saltpetre in the season. At the lower works, they employ commonly in the winter three hundred men, and in the summer above one thousand, but occasionally they have had twice these numbers. With this strength, and with twenty-five furnaces commonly at work, they have refined thirty thousand arrobas of saltpetre; and they guess the sea salt at ten thousand arrobas. To heat their furnaces they use vine branches, for which they give one real per arroba, or two-pence halfpenny for twenty-three pounds and one quarter.

These are the facts; let us stop one moment to examine them, at present, not as philosophers and chemists, but as merchants and politicians. If we allow the quintal of four arrobas to be equal to ninety-three pounds English, which is what the merchants reckon it, and the real to be worth two-pence halfpenny, we must conclude that the king of Spain makes his saltpetre for five-pence farthing; and it is clear that he sells it for thirteen-pence farthing per pound: but if, at the upper works, we allow one hundred men in winter, and three hundred in the summer, or two hundred on the average, at fifteen pounds per annum each, and say that they refine one thou-

sand quintals of salt-petre, we shall find that the labour alone comes to seven-pence three farthings a pound. To this must be added wear and tear of utensils, salaries, and above all for fuel. When a man considers, that not only in the first, but in every subsequent operation for refining the nitre, six pounds of water must be evaporated for one pound of the salt produced, and that twenty-three pounds and one quarter of such weak fuel as vine branches stand in two-pence halfpenny, although without the assistance of Mr. Watt he may not be able by calculation precisely to point out the quantity of fuel, supposing the evaporation to be conducted upon the most approved principles, yet every man may see that the expense must be enormous. Taking all these things into consideration, I am inclined to think, that the king of Spain does not make his nitre for twenty-pence per pound. As for the sea salt, I have not taken that into the account, because in Spain it has little value, except that which it has acquired by carriage; and indeed with us in England, as in France, the principal part of its price arises from the duty which is imposed upon it. The king of Spain sells his nitre at thirteen-pence halfpenny per pound; and if it costs him twenty-pence, he gets nothing by the bargain. But supposing he might take a profit by the sale; yet, if he sells it to himself, I know not where he is to look for gain; and if he compels his subjects to be the purchasers, he is guilty of oppression; he lays snares to catch the merchants, and he gives encouragement to smugglers.

The East India company, when it is refined, sell saltpetre in the English market for £2. 4*s*. 6*d*. the cwt. which, deducting seven shil-

lings and three-pence, the draw-back on exportation, is a small fraction under four-pence a pound, and the company would no doubt be happy to contract with Spain for less. In Bengal, as I am informed by one who was thirty years in the trade between China and that country, saltpetre before the East India Company undertook to make it on their own account, sold for four rupees the bag of 160 pounds, which, at *2s. 6d.* the rupee, would be exactly three farthings a pound; but in fact, the rupee is intrinsically worth only one shilling and ten pence, and by the Company is reckoned two shillings and three pence.

The foundation of this difference in the price of the production between Bengal and Madrid, must be obvious to every one, who considers that the evaporation, which is effected in the latter by the force of fire, may be carried on in the former without expense, by the sun and by the air.

Of all places, Madrid is the most improper for such an extensive manufacture; where they have long winters; where provisions, labour, fuel, are all at a high price; where the court resides; and where they have no navigation. If this manufacture were established in the south of Spain, near to a navigable river, none of these objections would have place; the sun and air would assist the evaporation, or completely finish it, as we see daily in their salt works on the borders of the Mediterranean; the little fuel which might be needful would find its way to them; and the nitre would be easily transported for the supply of distant markets: but even there it should not be administered on the sovereign's account; because, with every

advantage of situation, the monarch must be a loser, where the private adventurer would contrive to gain.

I have no doubt that motives of benevolence may have contributed to keep this voracious monster at Madrid, and the apprehension, that were it not cherished and supported, a multitude which is now fed by their attendance upon it would be reduced to famine. Of all employments for the poor, that which is most uncertain is the least desirable; and little is that to be encouraged, which in summer decoys them from the harvest, and from the works of husbandry, and, when the winter comes, turns them adrift, to remain inactive till the return of spring. These objections remain in force against the manufacture of saltpetre at Madrid, which feeds four hundred only in the winter, and when they should listen to the calls of agriculture, employs from thirteen hundred to four thousand. If these are not wanted for the labours of the field, and can find no constant work in profitable fabrics, it is plain that they have needlessly been drawn into existence, and that the population should be suffered to sink gradually till it has again found its proper level.

I have dwelt upon this subject, and treated it thus copiously, and pushed the conclusion as far as it will go, because the principle, which is thereby established, is of great importance to mankind, and yet seems to have been little understood.

I tried to obtain admission to the china manufacture, which is likewise administered on the king's account, but his majesty's injunctions are so severe, that I could neither get introduced to see it, nor meet with any one who had ever been able to procure that

favour for himself. I was the less mortified upon this occasion, because from the specimens which I have seen, both in the palace at Madrid and in the provinces, it resembles the manufacture of Séve which I had formerly visited in a tour through France.

I inquired also for the manufacture of gold and silver stuffs, of which Ustariz makes mention; but I could not find the least vestige of it. He tells us, that this establishment was made in the year 1712, with peculiar privileges, and with the best encouragement. Each loom was allowed one quintal of silk, with wine, oil, and soap, of each ten arrobas (232½ pounds) per annum, free of all duties, and the stuffs in their first sale were to enjoy the same exemption.

When I began to think of going to the court, I was for a time diverted from my purpose by the kindness of my friend Don Casimir Ortega, who introduced me to Count Campomanes, ~~governor~~ of the council of Castille. We called first at his house, but not finding him at home, we went to a society, founded A. D. 1738, called *Academia de la Historia;* it meets at the *Panaderia*, or *Casa Real*, in the Plaza Mayor, and he is the president.

The Plaza Mayor, in the year 1612, when it was finished, must have excited admiration; it is four hundred and thirty-four feet, by three hundred and thirty-four, and much too high for these dimensions.

In the Casa Real are some good apartments, looking to the sun, now given up to the secretary of this society. They have a good collection of books, manuscripts, and medals. They are employed upon the history of Spain, and have bestowed uncommon labour and attention in ascertaining both its geography and chronology. It is

here, that on all solemn occasions the royal family assembles to see the bull feasts.

When we arrived, the society was meeting. Among those to whom I was introduced was a man advanced in years, appearing, at first view, of a forbidding aspect and ungracious in his manner; he said nothing to me, but turned himself round, and took up a book. Soon after this, I saw him take the chair, and found that this was Campomanes. How I ever got resolution to visit him I cannot conceive, but I found him always easy of access, condescending, gracious, kind, friendly, and obliging to the last degree. It is possible that his goodness to me may have made me partial in my judgment of him; but, in my opinion, few kingdoms can boast his equal for understanding, knowledge, and benevolence. He appears to be one of the most superior characters that have adorned his country, and one of the best patriots that ever gave instruction to a rising nation.

It must be confessed, that my first introduction to him was awkwardly conducted, and for want of information, my subsequent visits, I can readily suppose, might appear ill timed to him. He had the goodness to make me promise that I would come to him the next day, but did not name the hour. In the afternoon I went, but the porter told me he was not at home. I said that I came by appointment. He then told me, that his excellence was asleep, this being his time for taking the *siesta*, but that I might go up and wait. I went up into a large hall, where I found many ill dressed people waiting, but no domestic. Here I continued for a time; but, upon observing some genteel visiters going through this hall, I followed them into the next

apartment, where I found a page writing at a table. Here I stopped and took a chair. After a time I inquired if his excellence was awake. The page left me, and in about ten minutes came back, and conducted me into the council chamber, where I found him in his bed-gown and white night-cap, walking with those gentlemen who had passed through to him without asking any question of the page. The count received me with the greatest goodness, and led me into his closet, where I had the happiness of enjoying his conversation more than two hours. He invited me to come to him whenever it should be agreeable to me, and desired that, without reserve, I would apply to him whenever I wanted either information or protection. Fearing I might break in upon his time, which I knew must be exceedingly valuable, because no minister in any kingdom has so much business passing through his hands, I returned no more till I was about to make my excursion to the north. I then called about two hours later than before, and, without asking any question, I walked up, and went directly to the council chamber. Here I found two gentlemen waiting, who had been announced. After a few minutes his door opened, and he came in, when, for the first time, I discovered he was near sighted in the extreme. When he had spoken to them, he inquired if any body beside was in the room. Upon this I presented myself, and was perfectly satisfied with my reception. As I had seen his chariot waiting at the door, I soon made my bow, and left him. After I became better acquainted with the manners in Spain, I had, on my return from my northern expedition, much more comfortable enjoyment of his society, and, instead of breaking

in upon his time, either when he had business to despatch, or when he was at his siesta, or when he wished to take the air, I used to assemble with his friends after the business of the day was over, when I never failed to meet with the most cordial reception. If I happened to go to him too early, he had the goodness to forgive me, and would often dictate to his page, and at the same time keep up the conversation with me.

Before I left him, he made me tell him what I had seen, and finding that I had not visited his favourite establishment, he recommended me to see it. This was the academy of the ennobled arts. The next morning I presented myself in his name to Don A. Ponz, the president, a man of taste and judgment in the arts, who conducted me through all the numerous and magnificent apartments, which have been given up to this useful institution. In the evening, I returned to see the pupils at their work, when I had the pleasure to find two hundred and eighty boys engaged in drawing, twenty employed in architecture, with thirty-six modelling in clay, some from casts, and others from a living subject. Every month, prizes are distributed to stimulate their diligence. This academy, like that which I have described at Barcelona, is open to the whole world, and every thing is provided for the pupils at the king's expense.

The cabinet of natural history is accessible to all; there is no need to wait for tickets, but at the appointed hours, any person, who is decent in his appearance, is admitted to walk round the rooms, and to examine what he pleases, as long as the doors are open; if he is peculiarly devoted to one branch of natural history, he is not hurried away from that

with the gaping multitude, and compelled to spend the allotted portion of his time in apartments, which contain nothing to interest him. This circumstance gave me peculiar pleasure, because my chief attention has ever been directed to minerals.

The collection of the king of Spain is truly magnificent, but far from being well-chosen, or well-arranged. For intrinsic value in silver, gold, and precious stones, perhaps no cabinet ever equalled this; but for science, I had rather be master of the more humble collections of Mr. Charles Greville, or of M. Besson.

Among the large masses of native gold, I could not discern one crystal; and as for those of silver, they appear to have been valued chiefly for their weight.

The large crystals of sulphur from Conil mine, near Cadiz, are well preserved, but like most other substances of the mineral kingdom in this cabinet, they are in too great abundance; every shelf is loaded with duplicates upon duplicates without end.

The specimen which most attracted my attention was a large rock, containing forty emeralds, in the form of hexagonal prisms, some near an inch diameter, and one inch and a half in length, and many of the finest water, without the appearance of a flaw. I wished for the privilege of taking away those only which had been absurdly cemented on this rock; my cabinet would have been much enriched by the accession of these beautiful crystals, and the rock itself would have recovered its more graceful, because more natural simplicity.

The collection of tins was exceedingly defective, and among these I observed two palpable misnomers, these were two dodecaedral garnets

placed among the tin crystals, each with the tin mark upon it, one, in the hand writing of M. Davila, the other of the merchant from whom he purchased it.

The extraneous fossils are exceedingly confused; requiring to be purged, and well arranged.

The animals are beautiful, and in high preservation.

The foundation of this collection was laid by M. Davila; but I apprehend that after he had published his much admired catalogue, the best of the specimens were picked and culled, and that the refuse only were carried to the king of Spain, who made the purchase, and appointed him first director of his cabinet.

The science of natural history is almost new in Europe. Sir Hans Sloane led the way in England, Buffon followed, and Davila brought up the rear. It is but of late years, that the sovereigns of Europe have taken this science under their protection. England began, and Spain has followed the example.

Should Izquierdo, the present director of the Spanish cabinet, bend his mind to natural history, I may venture to say, that all the other cabinets in Europe will soon be left far behind; but I fear, that his great talents will place him in some more exalted station; his strong understanding, quickness, and penetration, his universal knowledge, and his unwearied application, mark him out for the finance; and there, I apprehend, his ambition leads him. I met with him in Paris, where the most flattering offers had been made to him; but he chose rather to return to Spain, his native country.

In M. Clavijo, the vice-director of the cabinet, I found a sensible

man, and a most agreeable companion, well informed on every subject to which he had turned his thoughts, hospitable, generous, polite, and always ready to oblige. Bred in the civil departments of the state, his services on the death of Davila, and the promotion of Isquierdo, were rewarded by this appointment to the cabinet. Upon hearing me praise the emeralds I had seen, he advised me to procure admission to a private cabinet, belonging to the Marquis of Sonoro, minister of the Indies. I followed his advice, and got my friend Don Casimir Ortega to conduct me to his house. Here I was perfectly astonished at the beauty of his emeralds, superior to any I had seen for lustre and for size. He had likewise good specimens of gold and silver, with artificial birds in filigree, from the East Indies, which must give pleasure to all who can admire the works of art. This collection is valuable, but the marquis most evidently had no taste for science, and was solicitous, not to acquire knowledge, but to increase his treasure.

In the evening, I directed my course towards the Prado, which at this season of the year is much frequented: my objects of pursuit had been so many and so various, that I could spare but little time for this refreshing grove; but now, having finished all my work, I walked as long as I could see.

The coaches were numerous, and the walks were crowded, all was in motion, when suddenly, about eight in the evening, on the tolling of a bell, I was much surprised to see all motion cease, every coach stood still, every hat was off, and every lip seemed to utter prayer. This I afterwards found to be the custom all over Spain. If the affections of the heart correspond with the external sign of piety in Spain, and it

the moral conduct answers to the affections of the heart, this people must be the most heavenly-minded, and the most virtuous people upon earth. But all is not gold that glitters; and I had soon an opportunity of forming a conjecture, that all who thus moved the lip, were not to be reckoned among the friends of piety and virtue. When the prayer was over, the coaches began to move slowly on once more; but soon after this they went briskly off, and, the multitude dispersing, left a number of young women, attended by young men, who from that time seemed to be more at ease, yet, notwithstanding, kept within the bounds of decency.

I have observed all over Spain, that the leading principle is, never to give offence. People may be as vicious as they please; it may be notorious that they are so; but their manners must be correct. This regard to decency, certainly deserves the highest commendation.

At Madrid, the hotels are good. They have no table d'hote; but every one dines in his own apartment, where he is served with two courses, each of four or five dishes, with a dessert, and one such course for supper, with plenty of good wine, for which he pays seven livres and a half a day, including lodging; but if he eats no supper, then his dinner and his two rooms will cost him only five livres, or four and two-pence English.

Having, for the present, satisfied my curiosity at Madrid, *June 2*, I went with M. Izquierdo post to Aranjuez, seven leagues, which we performed in about three hours. In the way from Barcelona, seven

leagues with seven mules had been a long day's journey. In comparison with that slow motion we seemed to fly.

All the way we saw only gypsum rock, wherever the rock was to be seen. The road is perfectly well made, wide, straight, and planted on each side with elms. The country almost a dead flat. In this short space we left the Manzanares, crossed the Jarama, touched the Trajuna, and came to the Tajo which we called the Tagus.

After dinner I presented myself to our minister, Mr. Liston, and the day following I went with him to deliver my letters to Count Florida Blanca, the prime minister.

His excellency received me graciously, and told me, that whilst I remained in that kingdom, I had only to inform him what I wished, and it should be done for me. He is a little man, and, if I may judge by his eyes, exceeding hypochondriacal; but he has a look of benevolence, and, if his countenance does not deceive me, he has more than a common share of understanding. His manners are polished, and his address is pleasing.

Sunday, *June* 4, I went to court to see the king and all the royal family at dinner; then dined at Mr. Liston's, where I met Sir Alexander Monro and General O'Neil; and at five in the evening I went to Anover, three leagues from Aranjuez, to pass a few days with my friend Don Casimir Ortega.

Whoever goes to Aranjuez should take care to fill his purse, and he may be certain that he will soon find it emptied. For a single mule in a volante I paid four-score reals, which is sixteen shillings and eight-pence, to go these three leagues. For one miserable bed-room

you must give eight shillings and four-pence a day; and if you do not quit early in the morning, you are charged four shillings and two-pence for the half day. Yet with all these heavy charges, the inn-keepers are not unreasonable, because they have but a short harvest, in which they are to make up their rent; besides which, the expense being so exceedingly oppressive, no one ever comes here but by necessity, and therefore they who are obliged to come must bear the greater burden.

Anover, three leagues from Aranjuez, and four from Toledo, is built on the summit of a gypsum rock, commanding an extensive plain, which is watered by the Tagus. It has four hundred houses, and contains two thousand souls; of which, fourteen hundred go to confession, and receive the eucharist; the remaining six hundred are under ten years of age.

The extensive plain through which the Tagus flows, resembling the vale of Pewsey in Wiltshire, is of vast extent, running east and west; it is bounded to the north by a ridge of hills, on which this village stands, and beyond the river, to the south, by distant mountains, yet of gypsum, and not like the Wiltshire hills, of *chalk*. The soil of this vale, being sand and clay to the depth of eight or ten feet to the level of the river, is rich, and its fertility is abundantly increased by the overflowing of the Tagus, which in winter, leaves greater wealth behind than ever was collected from its golden sands. In summer, water is supplied by norias, at little expense beside that of labour. They had once a canal, made by Philip V. seven leagues in length, which brought to them the waters of Jarama; but about

twenty years ago, the head proved faulty, and it has never been repaired. The loss by this misfortune and neglect is almost inestimable; some idea may however be formed of it, by considering, that Anover alone has ninety norias, the expense of which would have been saved by the canal.

Behind the village, on the hills, there is a fruitful plain, whose soil is dissolved gypsum, sand, and clay. The plain is cut by innumerable ravines to a considerable depth, which discover the gypsum rock in horizontal strata, with fine blue clay, very hard, and remarkable for smoothness, interposed between the beds of gypsum; this gypsum is mostly crystallized, and is either solid, striated, stellated, lamellous, or in stalactites. In the ravines contiguous to the village, the poor have excavated little habitations, with each a chimney, and a narrow entrance by way of door; these are warm in winter, cool in summer, always dry.

The parish of Anover is a league and a half in length, and three quarters in breadth. It has one hundred and fifty proprietors of land the representatives of those by whom the country was recovered from the Moors, who are all freeholders, subject to no manerial rights, paying only two-tenths, one to the king, and the other to the church, each taken up in kind. As their estates are not entailed, industry is much encouraged. It is however much to be lamented, that the lands of each proprietor are scattered in small parcels in the common field, which, after harvest, is fed in common by all the parish flocks, so that they cannot plough, nor crop, nor feed them to advantage.

Their course of husbandry in the valley is, two years, barley, one year, wheat; and the fourth year, melons. These are natural to the soil, as appears by the cucumis elaterium, a native of this country. The crops are watered, and the produce of wheat is fifty for one; of barley, from sixty to a hundred; which is nearly five times the average produce with us in proportion to the seed. Don Casimir has for some years past been cultivating senna to great advantage: it is for the English market, and is much admired.

From the hills, and the extensive plain beyond them, they obtain wine, olives, oil, and corn, chiefly wheat; all exceedingly fine.

Their ploughs shew great scarcity both of timber and of iron; the beam is about three feet long, curved, and tapered at one end, to receive an additional beam of about five feet, fastened to it by two iron collars; the other end of the three foot beam touches the ground, and has a mortise to receive the share, the handle, and a wedge. From this description, it is evident, that the beam itself supplies the place of sheets; the share has no fin, and instead of a mould-board, there are two wooden pins fastened near the heel of the share. As in this plough, the share, from the point to its insertion in the beam, is two feet, six inches long, it is strengthened by a retch. They have no other implements of tillage, being perfect strangers to the use of harrows. It must be evident to every one who has the least knowledge of this subject, that no plough can be worse adapted to the soil; were they to procure models from Barcelona, they would soon be convinced of this.

For cheese they never use the rennet, but in its place, they substitute the down of the *cynara cardunculus*, a species of the wild artichoke,

with which they make a strong infusion over night, and the next morning, when the milk is warm from the cow, they put nearly half a pint of the infusion to thirty-two azumbres, or about fourteen gallons English measure.

Within these ten years they have established a manufactory of *saltpetre*, highly interesting to the chemist. To collect the earth most suited for their purpose, they go out early in the morning, and observe where the ground is wet, and changed to a dark colour, having been previously distinguished for its whiteness; this they bring home and wash, after the same manner as at Madrid. Saltpetre being composed of nitrous acid, with vegetable alkali, it has been imagined, that the ashes used in making nitre contributed the latter; but here they employ only the ashes of the tamarisk, which contain vitriolic salts; and as the vitriolic acid has a stronger affinity to the vegetable alkali than nitrous acid, it must be evident, that both the acid and the alkali of the nitre have some other origin, receiving nothing from the ashes.

After they have extracted all the nitre, they expose the earth to the influence of the sun, and then find the same proportion of the salt, as if it had never been lixiviated before.

Near to this village, towards the bottom of a ravine, are two springs containing Epsom salt, sulphat of magnesia, which, as the sun evaporates the water, forms in beautifully white, spongy, and mamellous flakes. The same salt is seen effloresceing from the gypseous earth and clay above the springs. With the nitre is found sea salt. Thus, in this elevated part of Spain, the vitriolic, the nitrous, and the muriatic acids, with magnesia, the vegetable, and the fossil alkalis, all meet together in a manner never

yet explored. When I come to Granada, I shall resume this subject, and collect such facts as appear to be connected with it.

The plants to be found here growing on the bare gypsum rock are, the Cistus halemifolius; Cistus helianthemum; Lepidium subulatum; Artimisia herba alba; Thymus zygis, used by the natives to prepare the olives; Teucrium capitatum; Statice retusa; Buphthalmum aquaticum; with which they make brooms; Marubium vulgare; Thapsia villosa; Peganum harmela; Carduus solstitialis; Francania levis; Sedum hispanicum; Francania pulvurulenta, thriving best on the saltpetre earth.

In the valley I found the following plants: Anchusa officinalis; Althæa officin. Andreala integrifolia; Arundo phrag. Adonis æstivalis; Aparine vulgare; Carduus acantoides; Carduus marianus; Chæmæmelumcotulâ aureâ; Centauria salmantica, used for making brooms; Crepis; Cucubalus behen; Cucumis elaterium; Cynara Cardunculus, used for turning milk; Daucus visnaga; Eringium commune; Echium vulg. Echinops strigosus, which produces the Amadoux, with which they obtain light, as we do with tinder; Euphorbia serrata; Lepidium latifolium; Lycium Europæum; Lychnis; Malva rotundifol. Ornithopus; Poliganum aviculare; Peganum harmela, the ashes of which they use in Arragon for making glass; Rubia tinctorum; Salix alba; Salsola tragus; Salsola sativa; Salsola Cali; Salsola fruticosa; Tamariscus gallica, which when burnt, produces vitriolated tartar and Glauber salt.

The *Salsolas* are worthy to be noticed; because they are commonly found on the sea shores, within the influence of salt water. Their production in this valley will create no difficulty if we call to mind the nature of the hills, and the quantity of salt which they contain.

Beef and veal sell for ten quarts the pound of sixteen ounces; mutton, twelve; bread four and a half; eight quarts and a half make a real vellon, or nearly ten farthings English. Labour in winter is four reals a day, in harvest, five. If hired by the year, they have forty-five reals a month, or about six pounds, two shillings per annum, and their board.

Hitherto I had associated only with those who were perfect masters of the French language: but now the time was come when I must begin to find my way without the assistance of interpreters. My first attempt however, was attended with some difficulty. My friend, Don Casimir, made my bargain for a borrico, and a guide to convey me to Toledo.

Wednesday, *June* 7, at break of day, I took leave of my hospitable friend, and put myself under the protection of my guide; with whom not being able to converse, I had the more leisure to make observations by the way.

His attention seemed to be rivetted; but for a length of time I could not imagine what kind of object he was seeking, till at last seeing a cloud of dust ascending from the vale beneath us, and observing that his eyes became more bright, and that he moved more lightly over the turf, I began to dive into his intentions, and to consider how I was to avoid the cloud, which to him, as it appeared, had the most powerful attractives. We descended slowly down the hill, and when we were got into the valley, saw before us a drove of carriers, with their asses loaded, carrying gypsum to Toledo. These were the friends and village companions of my guide, for whom

he had been looking out, impatient of that silence, which my ignorance of his language had imposed on him. Smothered with dust, I began to recollect all the Spanish I had ever heard, but could find no expressions, by which I could make him comprehend that I was not pleased with our new companions; till at last I halted, let them get a-head, beckoned my guide, and said with an angry tone of voice, pointing to his friends, "*No son mis amigos!*" This, repeated with energy, had a due effect, and from thenceforward I had a most comfortable ride.

Having descended into the valley, we saw no more *gypsum*, except two insulated hills to the right, entirely composed of this substance, which in Spain seems almost every where to supply the place of *chalk*. Instead of *gypsum* we found clay, pure, and without visible admixture, appearing from the summits of some swelling hills to their foundations; but as we advanced nearer to Toledo, we met with other hills, which even to the water's edge, on the banks of the Tagus, discovered only quartz, with the clay evidently the produce of *decomposed granite*, without the smallest vestige of the mica, or of the feld spat in mass.

The situation of Toledo is remarkable. The Tagus passing between two *granite* mountains, and almost surrounding one of these, forms a peninsula, on which the city stands, appearing at a distance like a cone.

Having passed the gate, we ascended to the apex, and soon fell down upon a posada, built by the archbishop at his own expense, and fitted up in the most commodious manner; there are no less

than forty-seven bed-rooms, spacious, neat, and furnished with good beds. The price of every thing is fixed, and is very moderate.

From a dialogue which my young friend and travelling companion, the cadet Don Nicolas de Llano Ponte, had composed for me, supposed to be between a traveller and his host, I contrived to let my present host know that I should dine there, and then took a walk to form a general idea of the city.

When I returned, I found all hurry and confusion in the inn: a *gran senor* had arrived soon after my departure, and occupied the whole attention of the posadero, leaving me without hope of procuring any thing that day to eat or drink. This *gran senor*, was M. Cabarrus, the projector of the Spanish bank, who, with his friend Izquierdo, were come to survey the river, for the purpose of a canal between this city and Madrid.

Nothing could be more opportune for me. I immediately joined company with them, and when they left Toledo, they transferred me to their friends, from whom I obtained all that a traveller can want, information and protection.

After dinner we began with visiting the Alcazar, that residence of ancient kings, now the magnificent abode of poverty and wretchedness.

The north front is by Alonso de Covarrubias and Luis de Vergara, who were employed by Charles V. The south front is the work of Juan de Herrera. The quadrangle is one hundred and sixty feet by one hundred and thirty, and, with the great staircase, the gallery, and the colonnade, has an air of elegant simplicity.

When the court retired from Toledo, this palace was suffered to decay, till some lovers of the arts, mourning over the ruins of the once stately pile, had made representations to the king, and urged him to repair it. In consequence of these representations, the archbishop himself undertook the business, and having restored the Alcazar to its pristine grandeur, converted it into an hospicio or general work-house for the poor. All the magnificent apartments, are now occupied with spinning-wheels and looms, and instead of princes they are filled with beggars. In these they work, and in the under-ground story, which had been the stables, they have their dormitory.

The good archbishop here feeds seven hundred persons, who are employed in the silk manufactory; but unfortunately, with the best intentions, he has completed the ruin of the city; for, by his weight of capital, he has raised the price, both of labour, and of the raw material, whilst, by carrying a greater quantity of goods to the common market, he has sunk the price of the commodity so much, that the manufacturers, who employed from forty to sixty workmen, now employ only two or three, and many who were in affluence, are now reduced to penury.

These people are so far from earning their own maintenance, that over and above the produce of their labour, they require forty thousand ducats a year for their support. If we reckon the ducat at 2*s.* 3½*d.* we shall find the sum amount to six pounds, ten shillings, and a fraction for each pauper, which alone, without the assistance of their work, should suffice for two of them. Of these forty thousand ducats, the archbishop gives, in the first instance, twenty thousand, and the

church supplies the rest; but having conversed with him upon this subject, I am much inclined to think that he gives a great deal more. He certainly supplies the deficit; and with his vast revenue he is always poor.

From the universal experience of mankind I may venture to assert, that if the most able silk manufacturer in Europe, who in the way of his profession has acquired wealth, were to feed, to clothe, and to employ seven hundred people upon the same terms, either with these in the Alcazar, or with those who belong to similar establishments in England, France, or Spain, he would soon be reduced to poverty. For health, for comfort, for profit, for population, let every family occupy a separate cottage, and learn to live on the produce of its industry. For want of a right understanding on this subject, benevolence in England, France, and Spain must sigh, and say, "When I would do good, evil is present with me." Such establishments increase the evils they mean to remedy, and aggravate the distress they were intended ro relieve.

From the Alcazar we went to visit the royal manufactory of arms, with which I was much pleased. The steel is excellent, and so perfectly tempered, that in thrusting at a target, the swords will bend like whalebone, and yet cut through a helmet without turning their edge. This once famous manufacture had been neglected, and in a manner lost, but it is now reviving.

The next morning I devoted to the cathedral, where I spent some hours agreeably. The building itself, the carving, the pictures, and the treasures it contains, all attract and rivet the attention. This mag-

nificent church is four hundred and four feet long, and two hundred and three feet wide; it has five aisles, and the highest of these is one hundred and sixty feet. The choir is covered with carvings representing the conquest of Granada, executed in a most superior style, by the two famous artists, Alonso Berruguete, a disciple of Michael Angelo, and Felipe de Borgona. The eye is never weary of examining these monuments of their consummate skill. Among the pictures are the works of the best masters, of Rubens, Titian, Dominico Greco, Vandyke, Guido, Carlo Maratti, Eugenio Caxes, Vincente Carducho, and Bassano. In the library, they have near seven hundred manuscripts.

The treasures of this cathedral struck me with astonishment. *La Custodia*, an elegant silver model of the cathedral, weighs twenty two thousand ounces, and took fifty-five ounces of pure gold for gilding. It contains a multitude of pillars, and two hundred little silver images of exquisite workmanship. In the centre of this edifice is placed a shrine of massive gold, weighing fifty pounds; another, which occasionally supplies the place of this, contains a statue of the infant Jesus made of pure gold, and adorned with eight hundred precious stones. In four separate closets, are four large silver images, standing on globes of silver, each two feet diameter, representing Europe, Asia, Africa, and America, with their several emblems, given by Anne of Newbourgh. The grand silver throne, on which is placed the Virgin, wearing a crown, and adorned with a profusion of the most costly gems, weighs fifty arrobas, which at twenty-five pounds the arroba, is equal to one thousand, two hundred, and fifty pounds. In the chapel of the Virgin, is an altar covered with gold and silver.

It is evident, that this profusion of wealth has arisen from the pious donations of the Spanish princes, out of the immense treasures obtained from their gold and silver mines, on the first discovery of America! The value of these donations may be ascertained with ease; but no pen can estimate, no figures calculate, no imagination can conceive, what would have been the value, what the produce of this wealth, if, instead of being thus buried, and, as far as relates to any useful purpose, lost; it had been employed in making easy communications through the kingdom, by canals and roads, or in the improvement of the soil, by draining, by planting, and by watering, or in the establishment, by means of premiums and by loans, of useful manufactures, suited to the genius of the people, and to the nature of the country. If that overflowing wealth had been diverted into profitable channels, what might Spain have been! We may venture to say that, if the gold and silver of America, instead of being buried in the churches, or which is worse, instead of pampering the pride, the prodigality, and the unprofitable luxury of the great, or, which is worst of all, instead of being idly squandered in useless and almost endless wars, if all this gold and silver had been devoted to Ceres, Spain would have been her most favoured residence, and the whole peninsula would be one continued garden.

The revenue of this cathedral is, perhaps not to be equalled by any church in Europe.

The archbishop has nine millions of reals a year, which, at two pence halfpenny per real, would be equal to ninety-three thousand, seven hundred, fifty pounds sterling; but we may with more accuracy say ninety thousand; a revenue, this fit for a sovereign prince. Besides the arch-

bishop, there are forty canons, fifty prebendaries, and fifty chaplains. Of the canons, fourteen are dignitaries. The whole body of ecclesiastics belonging to this cathedral is six hundred, all well provided for. They were formerly regulars of St. Augustin, but they are now secularised.

I had the curiosity to hear mass in one of the chapels, where they use only the Mozarabic Missal, which was composed by St. Isidore for the Gothic church after their conversion from Arianism to the Catholic faith, &c. This maintained its empire till the expulsion of the Moors, when the court introduced the Roman Missal, but at the same time, influenced by the lenity and good sense of Ximenes, indulged the nobles and the clergy of Toledo with their own Missal; but by degrees this was neglected, and almost forgotten, insomuch that when I was there, no one was present but myself and the officiating priest.

No religious establishment need be afraid of toleration, unless it be absurd in the extreme; cease to persecute, and all sects will in due time, dwindle and decay; they have the seeds of mortality in themselves, and nothing but persecution can prevent their dissolution. When government has given its sanction to one religion, and made provision for its priests; when with cool deliberation it has made choice of that which appears to be the best, and has affixed its stamp, it has done its duty, and may safely leave the rest to the good pleasure of its citizens, or if it interferes at all, it should be to encourage competition, and by no means to establish a monopoly.

In visiting the town-house, I was struck with a beautiful inscription on the staircase, and took the pains to copy it. The affinity between

the Spanish language and the Italian, is so visible, that most people who have any knowledge of the one, may, by the assistance of the French and Latin, understand the other. I shall, therefore, venture to give the inscription without attempting a translation. It is addressed to the magistrates of Toledo, and thus we read it:

Nobles discretos varones
Que gobernais à Toledo
En aquestos escalones
Desechad las aficiones
Codicias, amor, y Miedo.
Por los comunes provechos
Dexad los particulares:
Pues vos fizo dios Pilares
De tan riquissimos techos,
Estad firmes, y derechos.

This famous city, once the seat of empire, where the arts and sciences, where trade and manufactures flourished, is now brought to ruin and decay, and kept in existence only by the church. This city which contained two hundred thousand souls, is now reduced to twenty-five thousand. The inhabitants are fled; the monks remain. Here we find twenty-six parish churches, thirty-eight convents, seventeen hospitals, four colleges, twelve chapels, and nineteen hermitages, the monuments of its former opulence. Every street retains some token to remind the inhabitants of what their city was. They see many thousand

columns scattered about, each with "Sic transit" deeply engraved upon it.

The same desolation has spread to the surrounding villages, which are not only reduced in number, from five hundred and fifty one to three hundred and forty-nine, being a loss of more than two hundred villages in one district, but the remaining villages are also reduced to less than one quarter of their former population, and the devastation extends so far, that some of the most fertile lands are left uncultivated. This I can venture to affirm upon the best authority.

Two hundred and twenty years before the Christian era, Hannibal added Toledo, with Castille, to the empire of Carthage. From thence it passed under the dominion of the Romans, and continued in subjection till the reign of Eurico, the seventh sovereign of the Gothic line in Spain, who took possession of this city about A. D. 467. In that line the sceptre had continued more than 240 years, when the Moors entered Spain, encouraged by the weakness of a country, which through the jealousy of wicked sovereigns, had been disarmed, and made an easy prey to the first who should invade it. In three years they over-ran the whole kingdom, and Toledo, although better prepared than most other cities to make a vigorous resistance, submitted to its fate, A. D. 714. Alfonso VI. a warlike prince, with the assistance of Rodrigo Diaz, surnamed the Cid, rescued this city from the Moors A. D. 1085; but in less than fifteen years he lost the famous battle of the Seven Counts, and with it the city. From this time to the final expulsion of the Moors, Toledo was the object, for which most blood

was shed; and even after that period, it had little time to breathe before it was vexed by new storms.

The loss of two able sovereigns, of Isabella, A. D. 1504, and of Ferdinand, A. D. 1516, with the total incapacity of their daughter Joanna and the foreign education of their grandson Charles, but more especially the disgrace and death of Ximenes, convulsed the Spanish empire in its whole extent. This distinguished minister, like Richelieu in France, and Henry VII. in England, had curbed the power of the great feodal lords, had divested them of their usurped authority, and, in the place of the anarchy and confusion of distracted empire, was preparing to introduce a system of wise and equitable government, which at once should give stability to the throne, and protection to the weak, from the oppression of the strong. By his advice, immediately after the conquest of Granada, Ferdinand, and Isabella had applied themselves seriously to this important business, revoking the grants of cities, castles, lands, pensions, and immunities, which had been extorted from the crown, encouraging appeals from the tribunals of the barons, and attaching to their own persons, by a papal grant, the three great masterships of Calatrava, Alcantara, and St. Iago, with all their cities, castles, and strong places, usually given to the nobles. After the death of Ferdinand, Ximenes, appointed regent of Castille, during the minority of Charles, following up this plan, had courted the free cities, had armed the citizens, and by their means, had kept the great nobility in awe; but when he fell, inexperience, weakness, and rapacity taking the reins, ruined all his plans, and soon drove the people to despair. The citizens of Toledo were the first to take up arms, and

the last to lay them down. They chose for their general Don John de Padilla, a young nobleman of undaunted courage, but of no experience. All the cities of Castille followed the example of Toledo, and the rebellion breaking out with violence, was conducted with a rage and fury peculiar to civil insurrections. They neither shewed nor expected pity; but, to the utmost of their power, by the halter, by fire, or by the sword, they destroyed the persons and the property of all who opposed their measures. The ecclesiastics, without hesitation, joined them; but the nobility observed a strict neutrality. The motives by which these several orders in the state were actuated, will appear from the requisitions of the *santa junta*, an assembly composed of deputies from all the cities. The principal were these:

1. The king shall reside in Castille, or appoint a native regent.

2. None but natives shall hold offices in church or state.

5. The representatives of the people in cortes shall be paid by their own constituents, receiving neither place nor pension from the crown, and shall choose their own speaker.

7. The cortes shall be assembled once in three years, to consult on public affairs.

8. The soldiers shall have free quarters only six days, and on a march.

10. The excise duties shall be reduced to what they were at the death of Isabella.

11. All crown grants from that period shall be revoked, and all new offices shall be dissolved.

14. All the privileges of the nobles, prejudicial to the commons, shall be revoked.

15. The government of cities shall not be in the hands of the nobles, nor shall the governors be paid by them.

17. The lands of the nobles shall be taxed equally with those of the commons.

18. No money shall be sent out of the kingdom, nor shall it be granted by the crown before it has been raised.

20. The mayors shall continue in office only one year, unless the people desire it; and they shall be paid by the treasury, and not either by fines or forfeitures.

22. The goods of the accused shall not escheat till after sentence of condemnation is pronounced.

25. No man shall be compelled to purchase papal indulgencies.

By these requisitions it is clear that the commons were ground as between two mill-stones, oppressed both by the crown and by the nobles; but for want of proper leaders they obtained no redress. Sometimes they made application to the throne with the most flattering offers; at other times they solicited the nobles to take part with them against the usurpations of the crown, and held up to them a rod, in case of their refusal; but, whether they tried the force of promises to the king, or of threatenings to the nobles, these promises and threatenings met together in one object, the resumption of the crown lands.

The armies of the commons, every where defeated, were at length dispersed; Padilla was beheaded, and Toledo alone remained obstinate in its resistance, encouraged by the example of Padilla's widow, who not only declared her own resolution not to survive the loss of liberty, but urged them to avoid the eternal reproaches of posterity, by transmitting

to their children that freedom which they had received by inheritance from their progenitors.

The conduct and courage of this heroine might yet have retrieved their affairs, had not the court contrived to detach the ecclesiastics from the common cause. Deserted by them, and deceived in their expectations by the nobles, the commons, no longer able to make resistance, and having no alternative, surrendered the city by capitulation to the crown. (A. D. 1522.) Thus ended a war which had been carried on with spirit two and twenty months, and thus the nobles in Spain, as in all other countries, rather than give liberty to the people, submitted themselves to receive the yoke. The whole nation has suffered by this change in the constitution of their government; but no order in the state has lost so much as the nobility. From being little less than sovereigns, they are slaves, reduced to the lowest state of abasement; mere cyphers, without weight, consideration, influence, or dignity; not like lawful sovereigns, dethroned yet unsubdued, the objects of most generous pity and compassion; but like some contemptible usurper, when degraded and exposed to the derision of the surrounding multitude.

It was not till A. D. 1529, that the university revived, after the expulsion of the Moors. This seminary may be considered as the offspring of Salamanca, and although many distinguished characters have been educated here, the daughter has never been equal in splendour to the mother. They have twenty-four professors, and receive annually about four hundred students. The antiquated philosophy of Aristotle maintains unrivalled empire here.

Before I turned my back upon this most interesting city, I wished to have ascertained a fact, which is reported by no contemptible authority but I wanted opportunity.

It is certain that the water of the Tagus at Aranjuez, passing between mountains of gypsum and sal gem, is there very noxious; but at Toledo it is very good, and lathers well with soap. Mr. Bowles affirms, that below Toledo this water discovers no sign, by any chemical process, of either salt or gypsum. In confirmation of a theory, which he labours to establish, he relates another fact similar to this. He says, that after rain the river by Cardona (that high mountain of rock-salt already mentioned) is so impregnated, that the fish die; but that three leagues below the mount, neither by evaporation, nor by any other means, could he ever discover the least particle of salt.

These, and similar facts, if ascertained, would point out a law of nature with which at present, we are wholly unacquainted.

Provisions are remarkably cheap at Toledo: beef, eight quarts; mutton, eleven; bread, five; labour from September to May, four reals; the remainder of the year, four and a half.

It must always be remembered, that eight quarts and a half make a real, which may be reckoned two pence halfpenny sterling, but in truth it is not more than $2\frac{25}{64}$ pence.

June 9, I left Toledo. The way from this city to Aranjuez is interesting, as being a country evidently covered with *decomposed granite*. In one part of the way we find the clay unmixed, but as we proceed, we see the quartz blended with the clay, whilst the mica, as the lighter body, has been carried off. The vegetable tribes, are nearly the same

with those already mentioned at Anover, with the addition of excellent liquorice growing wild. Near the river side, is an extensive wood of tamarisk. This part of the country is chiefly the king's demesne, and is left uncultivated, given up to mules, although the land is rich, and, with proper tillage, would produce the most luxuriant crops. In one spot of low swampy ground, is saltpetre in abundance, discernible to the taste, and visible to the eye, although it is far from any dwelling, and free from all distinguishable admixture of either gypsum or calcareous matter.

As we approach the *Sitio*, that is, the royal residence, we meet with a delightfully shaded road; and after traversing a scorching plain, feel refreshed by the vapour arising from the water, with which a double row of elms is kept in constant vigour.

Aranjuez, at this season of the year, is a most enchanting residence: The palace is not superb, but it has the look of comfort, and the garden, watered by the Tagus, is beautifully laid out, without the least appearance of affectation, but natural, and suited to the climate, which requires close walks, and, of course, great simplicity; it is extensive, and, by that circumstance, aided by the size of the elms, which are, without exception, the largest I ever saw, it has an air of magnificence, but that kind of magnificence which consults only pleasure. The Cyprian goddess, with her little train, might have chosen this for one of her most favoured spots; but native beauty is here confined to the vegetable kingdom; few of her nymphs are to be found in this part of Spain.

The corps diplomatique seem to enjoy themselves more in this retreat than at the other sitios; they are near together; they give good

dinners; they have frequent balls; and, from day to day, they have one continued round of pleasant amusements.

In this sequestered spot, we meet with none but men of the most polished manners, well informed of every thing that is passing in the world, and with the most accomplished women, all cheerful, gay, and lively. The refinements of a select society like this were so powerfully attractive, that I laid by the pen, I closed my books, and, from morning to night, had agreeable engagements. I came here with Izquierdo, expecting to have explored the mountains in this vicinity with him; but the moment we left the chaise, we parted; he lived with the ministers, I with the corps diplomatique. A few days after my excursion to Anover, we met; when, like another Mentor, he awaked my attention to the chief object of my journey, saying, "My friend, we must quit this place, and return to the more rugged paths of science: this kind of life is not suitable to us." Thinking however some relaxation needful, and finding the society at Aranjeuz, although cheerful, not unprofitable, I determined to prolong my stay.

Here I often met one of my travelling companions, the tall French colonel, looking exceedingly dejected; his gloom was manly, yet increasing daily, it seemed at last to border on despair. Part of his eventful history had escaped from him on the journey, the rest I collected from his friends. A Frenchman serving in the Spanish army is sufficient to bespeak misfortune. His was an affair of honour, not uncommon among the officers in France, in which he had killed his colonel. Without loss of time he fled, and, being of a high and noble

family, he was strongly recommended to the Spanish court, where, as a brave officer, he met respect. Wherever he served, his conduct was admired; and had he been either discreet or fortunate, he must have risen high in his profession. His person and address were graceful, his understanding strong, and well informed, but for want of prudence, his ambition was sacrificed to his love of pleasure. As a man of gallantry, with such accomplishments, his empire must have been extensive; his vanity was flattered; but if he felt attachment, it was for one from whom he had nothing to expect but what the warmest affection could bestow. With her he spent every thing he had, and having exhausted his credit in Barcelona, where his regiment was quartered, he procured an exchange with an officer who was going to Mexico. No sooner was this arrangement unalterably fixed, than his friend and patron, General O'Neile, was appointed governor of Zaragoza, where he would have been soon provided for. This circumstance he felt severely, and this, together with a painful separation, his load of debt, his want of credit, his approaching journey, and long voyage, without money in his purse, or any resources but in his wit, was sufficient to depress the highest and the most independent spirit. Had the Duke de la Vauguyon known of his distress for cash, he would have offered his assistance; but this man was born to be unfortunate. To complete the whole, he had not been ten days at sea, before news arrived that the viceroy of Mexico, to whom he had the strongest recommendations, was dead.

A man may choose his situation, but this once chosen, it is the situation which most frequently makes the man.

Te facimus, fortuna, deam, cœloque locamus.

Soon after my return to Aranjuez, I had the honour to dine with the prime minister, Count Florida Blanca. The company consisted of the foreign ministers, who are invited every Saturday, and his under secretaries. This assemblage may appear incongruous, but it is not so; because these gentlemen, having been well educated, and trained up in the various civil departments of the state, and from thence despatched into foreign countries as secretaries of embassy, where they learn the language, and acquire knowledge, they have higher claims than those who have similar employment in the other courts of Europe. When they return to Spain, considered as servants of the public, they are received into the various offices, and have each his several department, one, France and England, another, the Italian courts, where they assist in expediting business. To them, a foreign minister can explain at leisure, with clearness and with freedom, in his own language, all that he wishes to have distinctly stated to the prime minister. From this office they are commonly promoted to some honourable and lucrative employment, as the reward of their long services.

I was struck with the elegance of the dinner, in which there was great variety, yet every thing was excellent; and had I been to form a judgment of the count, merely from the arrangement of his table, I should have pronounced him a man of sense. It is an old, and perhaps a well-founded observation, that no man is fit to govern an empire who cannot give a dinner to his friends.

The manners of the count are easy and polite, such as evidently mark the school in which he has been trained, distinguished not by familiarity, but by the most pleasing attentions.

At the beginning of the dinner, I was much surprized to hear myself addressed in English, by the favourite servant of the count, who brought me a dish, telling me, "you will find this excellent." Out of compliment for his civility, I helped myself, but had no sooner began to eat, than he brought me a second; and in like manner a third and fourth. It seems Canosa, for that was his name, had been a Spanish messenger, and having received civilities in England, he was happy to remember them. As long as I continued in Spain, he never lost an opportunity of paying me attention, and of rendering me every service in his power. His good will is courted by the whole corps diplomatique, because he not only can procure for any one an audience, in preference to all others, but can give the best advice as to the time and season of demanding one. It is natural for the foreign ministers to understand this matter; but the grandees, proud, haughty, and unbending, wait for admittance, or, wearied with attendance, go away without having been able to obtain it. I saw one of the old nobility, sitting thus unnoticed in the antichamber, and I am credibly informed, that whilst they are attending, men of little consideration are instantly admitted to the count, and going away are succeeded by others, who have no greater pretensions than themselves to this distinguished favour. But under a despotic government, the great lords must submit to be treated with contempt. If they will be respected, they must be free; and if they will be free,

they must be contented that the people should be so too; because liberty, if not equally extended to every order in the state, must in time be lost. This truth, founded on observation, and confirmed by the experience of all nations, is a truth of all others the least pleasing to the great; a truth, the force of which is seldom felt till it comes too late to be of service.

As soon as dinner was over at the count's, coffee was called for, and every one dispersed. The Spaniards went to their siesta, and I wandered about till Mr. Liston did me the honour to introduce me at the Duchess of Berwick's, where a pleasant party constantly assembled to drink tea and sup, when there was no ball, for all the time the court was at Aranjuez, the Duchess de la Vauguyon gave two a week, and the Duchess of Berwick one.

At a ball, to which I was invited by the former, I had the happiness to see Madame Mello dance a volero. Her motions were so graceful, that whilst she was dancing, she appeared to be one of the most beautiful women in the room; but she had no sooner retired to her seat than the delusion vanished.

This dance bears some resemblance to the fandango, at least in sprightliness and elegance; but then it is more correct than that favourite yet most lascivious pantomime. The fandango itself is banished from genteel assemblies, and justly so. As danced by the vulgar, it is most disgusting; as refined in higher life, covered with a most elegant yet transparent veil, it ceases to disgust, and from that very circumstance, excites those passions in the youthful breast, which wisdom finds it difficult to curb. This dance must certainly come to

them by tradition from the Moors. The music of it has such a powerful effect on young and old, that all are prepared for motion, the instant the instruments are heard; and, from what I have seen, I could almost persuade myself to receive the extravagant idea of a friend, who in the warmth of his imagination, supposed, that were it suddenly introduced into a church, or into a court of judicature, priests and people, judges and criminals, the gravest and the gay, would forget all distinctions, and begin to dance.

One night, as I was going to my hotel, on turning a corner, I saw at a little distance a gentleman entering through a window, but not upon the ground floor, whilst his friend, or confidential servant, was on the watch below. Without knowing what I was doing, I ran up towards him; but, upon better recollection, I made off as quick as possible, happy in having escaped the dagger, which my imagination painted as prepared to keep off all intruders.

The motions of the court are nearly uniform from day to day.

Whilst at Aranjuez, the king commonly amuses himself with fishing till the middle of the day, when he returns to dine, like every other branch of the royal family, in public. After dinner, follows a short conversation with the foreign ministers, which being finished, they retire to the garden; and he, accompanied by the prince, leaving the palace about three or four in the afternoon, goes twenty or thirty miles to shoot, following his sport as long as he can see.

The two infants, Don Gabriel and Don Antonio, either for the sake of health, or to keep them out of mischief, are obliged to go a shooting

to some other district, and this every day. If they return early enough, they mount their horses, and attend the princesses in their evening ride.

The old-fashioned courtiers dine at half after one, immediately on returning from the palace, but the more modern, at two o'clock, and the foreign ministers between that and three.

In the evening, after the siesta, the princesses, attended by their guards, the grandees, and some of the foreign ministers, enter their coaches, and move slowly on, saluting each other as often as they pass.

By the side of this long-extended mall, is a pleasant walk, well filled with company, and in which the princesses occasionally walk. If they are on foot, the whole company follows in their train; when passing in their carriages, all stand still to make their bow; and the cloak, which was flung loosely back, or held up, or tucked under the arm, and the flap, which was cast negligently over the left shoulder, is let fall, and hangs like the undertaker's cloak, when walking at a funeral. It is pleasing to see the genteel young Spaniard in his *capa*, which he throws into a thousand graceful forms, each remarkable for its peculiar ease and elegance, such as no foreigner can imitate; but when he meets a person of superior rank, or when he goes into a church, ease and elegance are banished by decorum, and this *capa* so much to be admired, degenerates into the stiffness and formality of a cloak.

The Spanish ladies discover the same taste in wearing the *mantilla*, a kind of muslin shawl, covering both the head and shoulders, and serving the various purposes of the hood, the cloak, and the veil. No foreigner can ever attain their ease, or elegance, in putting on this simple dress.

In the Spanish women, the mantilla appears to have no weight. Lighter than air, it seems to supply the place of wings.

One evening, when this public walk was thronged with ladies, many of whom were richly dressed, on the tinkling of a little bell at a distance scarcely to be heard, in one moment all were upon their knees. Upon asking a lady what was the matter, she told me, that *his majesty* was passing. Had I inquired of a Frenchman, he would have said, "C'est le bon Dieu qui passe." Her look pointed me to the spot, where two ladies of fashion, well known, and highly valued by all foreigners who have visited Madrid, had quitted their carriage to the host, which the priests were carrying to some dying christian. Had it been the rainy season, they must have done the same; and had the public walk been even wet and dirty none would have been excused from kneeling.

The heat, towards the middle of June, became exceedingly troublesome; and, notwithstanding the many allurements of this delightful spot, made me pant for some cool retreat. But, before I quitted a place to which I might never more return, I determined to explore the environs.

The country is divided into valleys by long chains of gypsum mountains, running nearly east and west, or north-east and south-west. One of these valleys is occupied by the *Calle de la Reyna*, a beautiful plantation of lofty elms, more than two miles in length. At the end of this I turned to the right, and climbed the mountains, where the royal deer range unrestrained by either bounds or fear, except when they see the king approaching.

I returned from my walk through the town, to see the amphitheatre for the bull feasts, and the new convent, which the king's confessor has made him build for the monks of his own order.

Another morning, I walked with Mr. Liston to see a *cortijo*, or farm of some hundred acres, belonging to the king. His majesty has two such near Aranjuez; but this, they say, much exceeds the other. The vines are here all of the choicest kinds. Some idea may be formed of its expected produce, by the dimensions of the cellars, of more than fifteen thousand feet in length, besides other considerable ranges, intended to receive the juice of the grapes, flowing in copious streams from two strong presses. The olives, produced here in great abundance, are pressed by conical iron rollers, elevated above the stage or floor, round which they move by two little margins, to prevent the bruising of the stones. The olives are carefully picked, and are pressed as soon as they are gathered. By this attention, the oil is not inferior to the best of Italy or France.

In Spain, they have few presses in proportion to their quantity of olives, and for this reason, as well as to obtain the greater produce, they leave the fruit in heaps till they ferment and rot; hence the oil grows rancid and ill-flavoured; besides, the pressing of the kernels is certainly not advantageous to the oil. The Spanish oil, being, for these reasons, inferior in its quality, is consumed chiefly by the natives, either at their tables, or in making soap. Where morals are not concerned, it is happy for human nature, that the taste is under the influence of custom, so as by habit to approve and choose, what once it loathed and rejected with abhorrence. From this circumstance, it is, that the Spaniards are not

merely contented, but pleased, with the peculiar flavour of their oil, and prefer it to the purest, which ever came from Lucca. This they condemn for its perfect insipidity.

All the buildings of this vineyard are upon a superior style, and are executed, not only in the most substantial manner, but with much taste. Nothing can exceed in beauty the extensive range of arbours, covered entirely with vines, so as at mid-day, under a most scorching sun, to yield a refreshing shade.

In point of œconomy I fear little can be advanced in favour of these establishments, to say nothing of the immense sums expended and buried in the earth; because it can never be imagined, that, as a royal vineyard, the wine will ever pay the labourers employed upon it.

This cortijo is inclosed by a parapet wall with palisades, and is surrounded by a deer park. The valley itself, not above one mile in width, is bounded to the south by gypsum hills, and to the north by mountains apparently of the same nature. It is watered by a canal from the Tagus.

Beyond this, to the north, is another valley, where the Tajuna flows.

The gypsum of this country is productive of sea salt, and of Epsom salt, both found crystallized, and abounds with nitre, appearing every where at noon, in white efflorescence on the surface, and before sun-rise in black spots. The gypsum is in horizontal strata. The *tamarisk* seems to be fond of gypsum: it abounds every where in this neighbourhood, and is peculiarly luxuriant on the borders of the Tagus.

In the vicinity of Aranjuez we see buffaloes yoked in pairs, either ploughing the land, or drawing heavy loads upon the highways.

The Spaniards, when the sun gets high, all retire to their houses, and exclude, as much as possible, the light; but a foreigner can only learn wisdom by his own experience. By wandering all the morning on the mountains, nature with him must sink, and his strength must fail; but returning with a keen appetite, exhausted, he sits down to a table plentifully furnished with whatever is most excellent in its kind, he eats heartily, he drinks freely, he feels his strength recruited, he sleeps profoundly, and, finding his spirits more than commonly elated in the morning when he awakes, he felicitates himself upon the enjoyment of such health as he never before experienced; but when, good easy man, he thinks full surely that he is wiser than the natives, he is soon convinced of his rashness, and finds, when it is too late, that he has been feeding the flame which is to consume him.

The day before my departure from Aranjuez, I had the satisfaction of seeing a pageant peculiar to this country; it is called the *Parejas*. The Prince of Asturias, with his two brothers, the infants Don Gabriel and Don Antonio, attended by five and forty of the first nobility, all in the ancient Spanish Dress, and mounted on high bred Andalusian horses, performed a variety of evolutions to the sound of trumpets and French horns; forming four squadrons, distinguished from each other by the colour of their dresses, which were, red, blue, yellow, and green, they executed this figure dance with great exactness, and made an elegant appearance.

When I left Aranjuez, it was computed that there were collected in it, not less than ten thousand souls; but no sooner is the court departed, than it becomes a desart.

Sunday, 18 *June*, in the evening, I returned to Madrid, and the next morning I attended at the bull feast.

The amphitheatre is three hundred and thirty feet diameter, and and the arena, two hundred and twenty-five. It is said to contain fifteen thousand spectators; but I doubt the truth of this assertion.

The feast is presided by a magistrate, attended by his two alguazils, to regulate the whole, aud to preserve order in the assembly.

At the appointed moment, immediately on a signal from the magistrate, two folding doors fly open, and a bull rushes furiously into the arena; but, upon seeing the assembled multitude, he makes a pause, and looks round, as if seeking some object on which to spend his rage. Opposed to him he sees a *picador*, mounted on his horse, armed with a lance, and coming on to meet him. As they draw near, they stop, then move a few inches, surveying their antagonist with a fixed attention, each in his turn advancing slowly, as if doubtful what part to take; till at length the bull, stooping with his head and collecting all his strength, shuts his eyes, and with impetuosity rushes on his adversary. The picador, calm and recollected, fixing himself firmly in his seat, and holding the lance under his right arm, directs the point of it to the shoulder of the raging animal, and turns him aside; but sometimes he is not able to accomplish this.

One bull rushed upon the lance, and rising almost upright upon his haunches, broke it to shivers; then with his forehead, as with a bat-

tering ram, he smote the picador on the breast, beat him down, and overthrew the horse. Instantly the *chulos*, active young men, with little cloaks or banners, distracted his attention, and gave the horseman an opportunity to escape. When he was retired, a second picador, armed like the former, offered battle to the bull. Flushed with conquest, the furious beast sprung forward, but being with dexterity diverted by the lance, he returned to the charge before the horse could face about, and fixing his horn between the thighs, tossed him in the air, and overthrew the rider. The *chulos* again appeared, and the man escaped, being relieved by the first picador, who had again entered the arena, mounted on a fresh horse. To this animal the first attack was fatal, for the bull avoiding, by a sudden turn, the lance, pierced the chest, and struck him to the heart.

Sometimes the bull tears open the belly of the horse, the rider is thrown upon his back, and the poor wounded creature runs about with his bowels trailing on the ground. In one morning I saw thirteen horses killed; but sometimes there are many more. These animals, have so much spirit, that the rider can make them face the bull, even when they have received their mortal wound.

When the bull, finding his antagonist constantly remounted, will no longer make battle, the *banderilleros*, or *chulos*, are let loose upon him. These are eight young men, each with a bundle of *banderillas*, or little arrows, in his hand, which he is to fix into the neck of the bull; not however attacking him from behind, but meeting him in front. For this purpose, they provoke him to attack them, and when he is preparing to take them on his horn, at the very moment that he makes a little stop,

and shuts his eyes, they fix their banderillas, and escape. If they cannot bring him to this point, they present the *moleta*, or little scarlet banner, always carried in their left hand, and provoking him to push at that, pass by him. When he turns quick upon them, they place their confidence in flight; and to amuse him, they let fall their moleta. This very often is sufficient; he stops to smell at it, then tramples it under foot; but sometimes, with his eyes fixed upon the man who let it fall, he follows with such velocity, that the banderillero can scarcely leap over the fence, before he is overtaken by the bull. I have seen bulls clear this fence, almost at the same instant with the man, although it is near six feet high. Beyond this fence there is another, at the distance of about five feet, which is considerably higher, to protect the spectators, who are seated immediately behind it; yet, I have been credibly informed, that bulls have sometimes leaped with such amazing force, as to clear both these fences, and fall among the benches.

When he has made battle for about twenty minutes, his time is come, and he must die. This certainly is the most interesting moment, and affords the best subject for a picture. The matador appears, and silent expectation is visible in every countenance; with the left hand he holds the moleta, in his right hand, the sword. During the combat, he has been studying the character of the bull, and watching all his motions: if this animal was *claro*, that is, impetuous and without disguise, the matador draws nigh with confidence, certain of a speedy victory; but, if he were cautious, circumspect, and crafty, if he were cool, and recollected, slow in forming his resolutions, but quick in their execution, he is called *obscuro*, and before him even a veteran will tremble. The matador draws

nigh, views him with a fixed attention, and endeavours to provoke him, but in vain; or, having provoked him, makes his lunge, but is eluded by the watchful animal, who instantly becomes assailant, and the champion flies; he flies, but he looks back upon the bull, that he may know how to regulate his flight. One of these, called Pepillo, was so active, and possessed such recollection, that when pursued, and near the barrier, at the very instant when the furious animal had closed his eyes to toss him, he put his foot between the horns, and with this borrowed motion, cleared the fence, and came down upon his feet.

Whilst I was in Spain, two matadors were killed at Cadiz. They were brothers. The first by some misfortune met his fate; the second, rushing forward, with brutal fury, thirsting for revenge, hasty and impetuous, he soon became the victim of his rashness.

If the matador is an adept in his profession, and calm, he contrives to irritate the bull, and the furious animal rushes blindly on the well-directed point.

The part first aimed at, is the cerebellum, or that part of the spinal marrow which is contiguous to it, and the sword enters between the vertebræ, or where the last of these is united to the head. With this blow the creature staggers, and, without losing one drop of blood, falls lifeless to the ground. If this stroke is not practicable, the sword is directed to the heart, and death, although speedy, is not quite so sudden. Sometimes it happens, even when Costillaris holds the sword, that he has not found the vital part. I saw him bury the weapon up to the very hilt; but, as the point did not penetrate the thorax, it only glanced along the ribs, and after a few minutes, was shaken out by the frantic animal.

One day he missed his aim, and the bull received him on his horn, he was tossed twice before he could be delivered, but he was not much hurt; yet his honour had received a stain, till, on measuring the horns, after the animal was dead, he shewed the spectators, that the horn by which he suffered, was two inches longer than the other. Upon this discovery, he received loud applause.

It is wonderful that this accident does not often happen, considering the length of the horns, which in some bulls, from point to point, is near five feet. I never saw such horns in England.

When the bull has at any time cleared the arena, he tears up the ground with fury; and when he has killed a horse, if unmolested by the chulos, he tramples indignant on the enemy.

The moment the poor creature falls at the feet of the matador, the trumpets sound, and three mules enter to drag him off.

The bull feasts are every week, frequently twice in the week during the summer; and each day six victims suffer in the morning, twelve in the evening.

Formerly they used high-bred horses, and lost few of them; but since they have adopted a different system, many are killed at every bull feast. It happened once, that sixty horses perished in one day. For these they give upon the average, only £3. sterling; whereas, the bulls are reckoned at £8. each. The stated expenses are enormous; but I have my accounts from the best authority:

	£	s.	d.
The alguazils, the guards, and attendants, cost per day, in sterling - - - - - - -	27	15	0
The two matadors in chief - - - -	30	0	0
The two inferior matadors - - - -	14	0	0
The eight banderilleros, at £3. each - - -	24	0	0
The two picadors - - - - -	27	0	0
If more are required, each receives for the morning £6, for the evening, £7. 10s.			
The mules, drivers, and other expenses - -	18	12	0
The eighteen bulls, suppose at £8. - - -	144	0	0
Suppose seventeen horses at £3. - - -	51	0	0
	£336	7	0

The priest who attends to administer the sacrament receives no pay.

To compensate for this expense, and to yield a balance in favour of the general hospital, to instance only one day, July 3, 1786, the receipts were as follow:

Collected for the seats, and for people to sell water -	605	13	6
Received for the eighteen dead bulls - - -	70	4	0
Received for seventeen horse skins - - -	6	14	6
	£682	12	0

The week following, the receipts were more than eleven hundred pounds; but the average may be fairly stated at seven hundred pounds

a day, leaving a balance of near four hundred pounds a day for the service of the general hospital at Madrid.

The price of admission differs considerably, according as you are covered or exposed, in the sun or in the shade. A box for the day, which may conveniently accommodate eight or ten people in the shade, will cost £3. 12*s.* but in the sun, £1. 16*s.* and between both, £2. 8*s.* Fashionable people take a box. A seat, if covered, in the shade, and in the front bench, costs 7*s.* 3*d.* for the day; but a back seat in these covered benches, on the sunny side of the theatre, is only three shillings. The cheapest seat for the day, exposed to all the inclemencies of the weather, to rain, if it should rain, and to the overwhelming heat of the summer's sun, is something more than 1*s.* 2*d.* The fondness of the Spaniards for this diversion is scarcely to be conceived. Men, women, and children, rich and poor, all give the preference to it beyond all other public spectacles; and, for my own part, I am ready to confess, that the keenest sportsman cannot be less attentive to his own danger, or to the sufferings of the game he is pursuing, than I was to to the sufferings of the bull, or to the danger of those by whom he was attacked; nay, so inattentive was I to my own danger, that, although by a shivering, I knew I was taking cold, I had not resolution to retire.

My cold was attended by an ague, and this again was followed by an ulcerated throat. However, by the aid of Don Antonio Gimbernat, an able surgeon, and most amiable man, I got through it, and at the end of a month, was well enough recovered to leave Madrid, where the scorching sun became insupportable.

The contrivances to moderate the heat, are excellent; they have mats and canvas on the outside of their windows to exclude the sun, and during the day, they keep the shutters closed, so as to transmit the smallest quantity of light, having previously, before the rising of the sun, admitted a supply of fresh air sufficient for the day, and sprinkled the whole house with water.

By these means, their rooms if not frequented, are kept cool and fresh during the most suffocating and scorching heat of summer, even at Madrid. In one of these they sit all the morning; in one they dine, and this commonly is the worst apartment in the house; in one they sleep their siesta after dinner; and in the best, the company assembles for the evening.

The freshness of these apartments has made me often think that discomforts and inconveniences, if decidedly intolerable, are much to be preferred to those, to which patience and moderation may be reconciled: because, when by necessity men are roused to action, there are few evils for which they cannot find a remedy, and few difficulties which they cannot surmount.

By these contrivances, and by keeping within doors, the day passes pleasantly away. This however is not all that a traveller requires. If he will gain information, he must not stay at home. With this idea, I hastened my departure from Madrid, and soon made a party for the north of Spain, taking for my companion, my amiable young friend, the cadet with whom I had travelled from Barcelona to Madrid. I was to visit his native province, I took no letters, but a few from Count Campomanes, who likewise was from that part of Spain.

Had I made application, I might have had many more; but these I thought would be sufficient; and so I found them.

Before I left Madrid, I inquired the price of provisions, which I found to be as follows: beef, fourteen quarts (which is a fraction under four-pence) per pound; mutton, fifteen quarts, which is a fraction more than four-pence; veal, thirteen quarts; cheese, twenty; bread, 6½ quarts, for the finest at the king's oven, and 3½ for brown bread, at the common ovens. Here it may be remembered that 8½ quarts make a real vellon, which is equal to 2¾ penny English. Wine is eight quarts for a quartillo, which is something more than a pint, or 1⅛ pound weight. Labour is five reals, or one shilling a day.

JOURNEY

FROM

MADRID TO THE ASTURIAS.

ON Saturday, July 22, 1786, my young friend, with the agent of his family, and myself, set out in two little chaises, leaving Madrid soon after midnight, to avoid the heats, which are intolerable in the middle of the day. By this arrangement, we escaped one evil to fall into a greater, for which we were not prepared: because, the chaises being open, the night intensely cold, and the north wind in front, it was difficult to preserve the vital heat till the rising of the sun.

Before eight in the morning, we advanced five leagues over a level country, covered with *granite sand*, and having reached the mountains, consisting of friable white *granite*, we came to Galapagar, two leagues beyond the Gaudarrama.

From hence we saw before us a second chain of mountains, co-

vered with snow, and in them discovered the source of that chilling blast which had made us shiver in the night.

The whole country was alive; all were busily employed in bringing home their harvest. The waggons are drawn by oxen, and the wheels are shod with wood instead of iron. It is surprising to see what heavy loads two oxen will draw, pushing with their foreheads against a cross beam fastened to their horns.

The country is open, and badly wooded, although both elm and ash shew the most luxuriant growth.

At the end of about seven leagues, or ten hours' journey from Madrid, we begin to ascend the chain of mountains, separating New from Old Castille; and in two leagues more, having passed the Puerto de Guadarrama, find a good venta on the northern declivity of these granite mountains. In this venta we meet with comfortable beds; and, to prevent disputes, the price of every thing is fixed by government. A turkey is eight reals, or about 1*s.* 7*d.* a pullet, six reals; a young fowl, three reals and seventeen maravedis, or about tenpence halfpenny; nothing can be more reasonable; but the misfortune is, they are never to be had. However we had no reason to complain.

Soon after midnight we arose, took our chocolate, and proceeded on our journey. The pleasantest meal we made, was our breakfast, on cold ham, which we took with a keen appetite, under the first shade we found after the sun was up.

The country we passed over, is little susceptible of culture, being chiefly either *white granite decomposed*, or the hard *grey granite*, resisting all the powerful solvents which nature can employ, and remaining

rugged, without the least sign of vegetation. Yet, in the midst of this wide waste, are some fertile spots, either covered with ilex, or broken by the plough; and even some extensive downs.

This morning we travelled three leagues, to Villacastin, and there reposed all the middle of the day.

This village contains two hundred and eighty houses, and sixteen hundred inhabitants. It has only two convents; one for men, the other for women. Here are two hospitals for the sick, and for the travelling poor: this circumstance may account for the great proportion of funerals, being about fifty in the year, whereas the births do not exceed forty. This village has one parish church, and four chapels, standing, besides five more fallen to decay. Here we see two extensive buildings for shearing the Merino flocks. For want of streams, their corn is ground by wind-mills.

In this place we loaded our pistols, being to pass through a forest, famous for robbers, and marked with monumental crosses. Unfortunately, my driver took the lead, and left the other carriage out of sight. We had ascended the mountain, and were got into the thickest of the forest, when at a distance, to the right, I saw two fellows with muskets crossing with hasty steps to meet us; they soon came up to us, and the driver stopped. These were two beggars, who exacted money from all passengers, under pretence of having protected them from thieves. The account they gave of themselves was, that they were of a family which had been commissioned by Philip V. to guard this dangerous pass; yet, surely if employed by government, they should wear some uniform, or at least, have some badge to distinguish them from robbers.

This forest is of ilex.

At seven in the evening we arrived at San Chidrian, having this day travelled seven Spanish leagues, or, as I imagine, more than five and thirty miles.

In all this country the white wine is excellent, not so sweet and spicy as that of Foncarral, near Madrid, but equally delicate in its flavour.

From San Chidrian, we traversed a vast plain of *granite sand*, very coarse, loose, and unprofitable, although it would evidently bear good elm and fir. Wherever this sand will pay for tillage, they make it yield wheat and barley. They are now reaping, and as fast as they reap, they tread out the grain with mules, horses, oxen, and the *trillo*.

The trillo is made with planks of about three inches in thickness, and is five feet long, by 2½ feet wide; the under surface is studded with gun-flints, to the number of about two hundred, for the purpose of cutting all the straw to chaff, and disengaging all the grain. The person who drives the horse, ox, or mule, round the floor, either sits or stands upon the *trillo*, and the operation is called *trillar*.

When the corn is cleansed by the wind, it is immediately put into the granaries, without fear of its heating there, because, when it is reaped, it is as dry as shot, and the country is far from being damp.

The general colour affected by the peasants in this province, as in many other parts of Europe, more especially in Wales, is brown, but the genteel people are fond of black.

Having passed the villages of *Adanaro*, *Hontoria* and *Gutierre-Munoz*, we arrived about nine in the morning at *Aribalo*, a considerable city,

with eight parish churches, besides one in the suburbs, eight convents, two hospitals, two royal granaries, forty-two priests, and sixteen hundred houses.

From hence we passed over a plain of *granite sand* and crossing the river *Adaja*, which runs north into the Duero, we came through vineyards to *Ataquines*.

Even in the most desolate part of this route, a plantation of firs, and one majestic elm, shew what the country can produce.

Ataquines is a miserable city, and might be easily mistaken for a village. The cottages are low, and badly built of brick, with sheds before them; they are in number two hundred and seventy, to lodge eight hundred people. The births, on the average, are forty-five; and the burials, twenty, of which, most are children in the small pox. Here are four priests. It is remarkable, that they have eight hundred oxen. Bread is sold at four quarts the pound of sixteen ounces; beef, eight quarts, or, two pence farthing English; mutton they have none; wine is about one penny the quart. The church is built of brick, supported by granite pillars, and is lighted by massive silver lamps. The gold and silver of Peru and Mexico found their way into this city, but for want of taste, this unexpected display of wealth excites nothing but disgust.

This country, with industry, good government, and a market for its commodities, might be rendered one of the richest in the world. It stretches, without mountains, far as the eye can reach; it abounds with rivers, and it enjoys the sun; yet, with all these advantages, the farmers, for want of watering their crops, get only ten for one upon the seed. Their plough is antiquated, and like that last described. Here flocks of sheep abound.

This morning we traversed the plain three leagues, to *Medina del Campo*, on the Zapardiel, a little river communicating with the Duero, between Toro and Tordesillas.

Medina has nine parish churches, seventy priests, seventeen convents, two hospitals, and at present, only one thousand houses. The collegiate church, built of brick, is much, and deservedly, admired for its roof. This city seems evidently going to decay. The houses are all of brick, irregular, and low. It was formerly the residence of kings, and contained fourteen thousand families. It is evident that elms, poplars, mulberries, vines, and olives, if planted, would flourish here.

From hence we turned to *Valdestillas*, four leagues, over a most beautiful country, abounding with corn and wine, not hilly, but gently swelling; all open, and destitute of trees, yet able to bear the most lofty elms. The soil is still granite sand, mixed with smooth round gravel, such as may be well expected near the conflux of so many rivers, here assembling from three points of the compass, from the east, from the north, and from the south.

Valladolid was fixed upon as our resting place in the middle of our journey, and I was not displeased with the arrangement, because this venerable city is highly interesting to a traveller.

Here I was so happy as to meet the Marquis de Mos, a nobleman of Gallicia, grandee of Spain, and colonel in the army, who had done me the honour to notice me at court, and now took me under his protection. He had taken a house here only for the sake of being present to prosecute a suit in chancery.

Valladolid is a considerable city, having an university, colleges, cathedral, palace, courts of justice, and one of the two high courts of chancery. Upon passing the first gate, you find a spacious area, bounded by seventeen convents; from hence, entering through the second gate, the city strikes you with every appearance of antiquity. The Plaza Mayor, or great square, is spacious and venerable; yet, compared with the great body of the city, it is evidently modern. The cathedral, built by Juan de Herrera, is massive, heavy, and, in my mind, far from elegant; it has the Grecian arch, and the pillars in front are Doric. The treasures of this church are great; the *Custodia*, by Juan de Arse, is of solid silver, and more than six feet high; the other ornaments and jewels are innumerable, and the whole together is inestimable; yet the bishop has not more than five thousand pounds a year. This city has fifteen parish churches, with five annexed, forty-six convents, two hundred and twenty-seven priests, six hospitals for the sick, for infants, and for lunatics, five thousand families, and twenty thousand souls.

The university has more than two thousand students, forty-two professors, and fifty doctors, distributed in seven colleges. In the year 1346, this seminary was instituted by D. Alonzo XI. and A. D. 1784 to 1785, there entered and were matriculated, 1299 students.

The church and convent of St. Benito are worthy of attention; but the public edifice, in my opinion, most to be admired, is the church of San Plabo, near the palace, whether we consider the elegance of the whole, or the high finishing of the basso relievo figures and ornaments, which, after a lapse of three hundred years, seemed to have

suffered little by their exposure to the weather. In this building the quadrangle of the novices deserves the highest praise.

The king's palace, rather elegant than grand, is still preserved; but all the palaces of the great nobility are going to decay.

Here Charles V. received the news, that his victorious troops had taken Rome, and made the pope his prisoner; and from hence he ordered prayers to be offered up in all the churches of Spain for the deliverance of the sovereign pontiff. In this city his successors kept their court, till Philip IV. removed it to Madrid.

The buildings are chiefly brick, but some are of limestone. Among the materials, no inconsiderable quantity of granite, brought from the neighbourhood of Villacastin, at the distance of thirteen leagues, with many hundred pillars of the same, remain as monuments of ancient splendour.

All the public walks are lined with trees.

The country round this city is a perfect garden, watered by norias. It produces white wine of a good quality, excellent madder, some silk, and a few olives. All these productions will increase, when they shall obtain a vent in foreign markets.

At present the poor are numerous, fed by the convents, and manifest the wretchedness of this once flourishing metropolis.

It is fallen indeed, but on the projected canal we may evidently read, *resurgam*. This undertaking, once regarded like the wild projects of the giants, will, in all probability, and at no distant period, be accomplished, provided, Spain has the wisdom not to be engaged in war.

The canal begins at Segovia, sixteen leagues north of Madrid, and is separated from the southern canal by the chain of mountains which we passed at Guadarrama. From Segovia, quitting the Eresma, it crosses the Pisuerga, near Valladolid, at the junction of that river with the Duero, then leaving Palencia, with the Carrion to the right, till it has crossed that river below Herrera, it approaches once more the Pisuerga, and near Herrera, twelve leagues from Reinosa, and receiving water from that river in its course, it arrives at Golmir, from whence in less than a quarter of a league, to Reinosa, there is a fall of a thousand Spanish feet. At Reinosa, is the communication with the canal of Arragon, which unites the Mediterranean to the Bay of Biscay, and from Reinosa to the Suanzes, which is three leagues, there is a fall of three thousand feet.

Above Palencia is a branch going westward, through Beceril de Campos, Rio Seco, and Benevente, to Zamora, making this canal of Castille, in its whole extent, one hundred and forty leagues.

They have already completed twenty leagues of it, from Reinosa to Rio Seco; which, with twenty-four locks, three bridges for aqueducts, and one league and a half of open cast through a high mountain, has cost thirty-eight millions of reals, or three hundred and eighty thousand pounds sterling; and this, supposing the twenty leagues equal to eighty-eight miles, is £4,318. per mile. For work executed in so complete a manner, this certainly is not extravagant.

To expedite this arduous undertaking, they employ two thousand soldiers, and as many peasants. The former receive three reals a day, besides their usual pay, that is, when they work by the day; but

they work mostly by the piece. To regulate the prices, they have three tables, 1st. for the quality; 2d. the depth; 3d. the distance; all founded on experiments. The qualities are, 1st. sand; 2d. soft clay; 3d. hard clay; 4th. loose schist; 5th. hard schist, and solid rock; of which, they make three distinctions, viz. such as can be worked, 1st. by the pick and shovel; 2d. by wedges and sledges; 3d. by boring and by blast. This last again is subject to distinctions. The canal is nine feet deep, twenty feet wide at bottom, and fifty-six at top.

When this canal is perfected, which may be in less than thirty years, the world, perhaps, will have nothing of the kind to be compared with it, either in point of workmanship, or of utility. This can be obvious only to those, who have seen this country. To say nothing of coals, to be carried from the Asturias to the south, and of manufactures which might then be established in Castille, and find a ready market by the Bay of Biscay, the excellent wines of that sandy province, now scarcely paying for cultivation, would not only find a ready sale, but would be in the highest estimation; the oils would fetch their price, both for the table and for soap; and the corn, which in abundant seasons proves the ruin of the farmer, would be a source of opulence, and stimulate his industry to fresh exertions.

For want of such an outlet, provinces designed by nature to rejoice in plenty, and to furnish abundance for exportation, are often reduced to famine, and obliged to purchase corn from the surrounding nations. Considering such undertakings, and seeing them, either languish for

want of men and money, or not carried on with a spirit answerable to their vast importance, how natural is it to execrate the madness and folly of mankind, so often engaged in prosecuting unprofitable wars, from motives of covetousness, or from the most idle jealousy and groundless apprehensions; spending those treasures for the molestation of their neighbours, which might be more profitably employed for their own emolument and exaltation, if expended, in agricultural improvements, and the general fomentation of their industry. The whole annual expense of this canal, is not equal to the construction of one ship of the line. Nay, we may venture to assert, that the men and money absurdly spent by Spain in the prosecution of the last war, would have finished forty canals, equal to that I have been describing. The discussion would be long, but the proof is easy. Money is soon reckoned, if we omit the multiplied calculations, needful to estimate its value, according to the various channels in which it flows, and the purposes for which it is employed; but men are easily overlooked; yet, not one of these who falls in the vigour of his age, can be reckoned, even in the first instance, at less than forty pounds, without taking into consideration, the contingent injury in the loss of a subject, who might have lived to become the parent of a numerous offspring.

'Before I left Valladolid, I inquired into the price of provisions. In this city, beef and mutton are twelve quarts the pound of sixteen ounces; and bread is five quarts; wine is about a halfpenny the English pint. It must always be remembered, that eight quarts and a half make a real.

I cannot quit this city without making mention of a practice, which

the Marquis de Mos assures me is common in Gallicia. He tells me, that in pleurisies they give the seeds of ivy, bruised, to the quantity of two tea-spoonfulls, repeated every eight hours, and that this simple medicine has been found to be infallible. I report it upon his authority, having never since had occasion to prescribe it.

"Thursday, July 27, we left Valladolid at five in the morning, and ascending gradually a limestone hill for about half a league, we came to an extensive plain, fertile in corn, but not well cultivated; yet, some of the farmers upon this rich loomy soil, this mixture of clay, sand and calcareous earth, have most luxuriant crops. The thistles are rampant, more than eight feet high. The country is open, and void of trees; excepting near one little convent, which enjoys the extensive shade of a few lofty elms.

"Before noon, we came to a village, comprising seventy miserable cottages, called *La Mudarra*, built upon a fine limestone rock. Its situation is healthy; yet, these seventy families, contain only one hundred and twenty souls.

"As we advance along the plain, towards Medina de Rio Seco, at the distance of about seven or eight leagues, the limestone rock becomes more destitute of soil.

"*Medina de Rio Seco* already feels the influence of the canal, for though it still wears the face of misery in its buildings, yet the people seem more alert, and farther removed from that torpid indolence so visible in other villages of Old and New Castille. Trade is increasing, and manufactures begin to flourish, particularly those of serge. It is to be lamented, that the silk-ribbon weavers should waste their la-

bour, by not adopting the modern improvement of the loom. The surrounding country abounds with corn and wine, and improves in the cultivation of the olive. All these commodities, with the manufactures, and the easy transport by the canal, have invited merchants to open houses, and to bring new capitals into circulation here.

Medina had formerly seven thousand houses; it has now only twelve hundred; but, as these contain more than eight thousand souls, it is evident that trade is brisk. Here are four convents for men, two for women, three parish churches, with forty priests. The churches are all good; that of S. Maria is elegant, with a lofty roof, highly finished, and supported by well-proportioned pillars. In this church, the *Custodia* is solid silver, and weighs more than one hundred weight. The church of *St. Francisco* is rich in relics; but this, it must be confessed, is a perishable commodity.

From hence to *Mansilla*, eleven leagues and a half, the country is all level, open, rich, and productive of both corn and wine; abounding in villages, and occupied by husbandmen. The route we took was through *Cedinos*, *Vecilla*, *Alvires*, *Matallana*, and *Santas Martas*. The former of these includes an hundred mud-wall cottages, and two churches. *Vecilla*, one hundred and sixty such miserable habitations, with two churches, and six priests. This belongs to the Count of Altamira, a grandee of Spain. *Mayorga* has now only six hundred and fifty such cottages; and although, formerly, it numbered seventeen thousand, no traces of these remain. It is divided into eight parishes, and maintains twenty-four priests. Here are three convents, and one hospital. This town belongs to the young Duchess de Benevente. *Alvires* is wretched;

Matallana, more so; *Santas Martas*, but little better; and *Mansilla* has no room to boast. All are equally of mud-wall, and mouldering away.

The *trillo* is every where at work, some with oxen, others with mules. The plough resembles the last mentioned, and exhibits a want of intercourse with more enlightened provinces. The cart wheels have neither nave, nor spokes, nor felloes; but are only planks fastened together, and turning with the axis. This usually is eight inches in diameter. About Mansilla the wheels are bound with iron. We still see only oxen in the teams. As we approached Mansilla, I had an opportunity of witnessing the generous ardour of my young friend, on seeing a group of peasants conducting a sick man on the road, who appeared to be in a dying condition. My friend soon recognized them as tenants, and flew to the sick man, but as speedily returned to me to beg some of the pills, which he had sometimes observed me to take. On being informed that they would not be proper; he gave him money, and charged one of the peasants to take care of him, till he should be restored to his family. How delightful is it to contemplate such generous feelings in the youthful mind!

Mansilla was once fortified, as may be seen by the round towers still remaining. It contains four hundred families, one convent, and one hermitage. Here the Duchess of Alba appoints the magistrates.

From Mansilla, the face of the country changes. On crossing the Ezla we find meadows, inclosures, and a variety of trees, chiefly poplars, elms, and walnuts; then passing among hills composed of sand, clay, and gravel, rounded by fluctuating waters, we fall down upon

a rich valley, at the head of which stands *Leon*, protected by high mountains from the north.

We went immediately to the house of Don Felix Getino, a canon of the cathedral, nearly related to my young friend, where we met with a most hospitable reception.

Leon contains fifteen hundred families, with six thousand one hundred and seventy souls, distributed in thirteen parishes, with four hundred and twenty priests, a cathedral, two royal foundations of S. Isidro and S. Marcos, besides nine convents, with a *Beateria* for nuns who are not subjected to vows, a few hermitages, and some hospitals.

The cathedral is deservedly admired for its lightness and elegance. It is a Gothic structure, with a lofty spire, highly finished, not only with basso relievo ornaments, but with open work transmitting light, and beautiful in its kind, resembling the finest point lace or filigree. The windows are all of painted glass. In the sacristy is a silver crucifix, with its canopy supported by four Corinthian pillars, near seven feet high, the whole of silver. The silver mount on which it stands, is divided into compartments, each exhibiting some representation of the Passion in basso relievo. The custodia is more than six feet high, made of silver, and elegantly wrought with images. The bishop's revenue is 30,000 ducats, or about £3,295 sterling, per annum. The canons are forty, including always the king and the counts of Altamira.

When I came back from viewing the cathedral, I saw clearly that I had done something wrong, because our old canon, who had received me with a smile, now regarded me with horror, and even my

young friend look frighted. The fact was briefly this; having slit my nail, I inadvertently took out my knife, as I was walking, and pared it even. Had I been conscious of what I did, I should never have conceived that they, who spit in their churches without reserve, could have been offended. But before my return, the report had reached the good old man, and made him tremble; yet, upon my solemn declaration that I meant no insult, he became gradually calm, and, after some time, resumed his wonted smile.

The religious house, or, *Casa real de San Isidro*, has sixteen canons regular of St. Augustin. In their church are deposited the bones of the patron saint; in a large silver urn, and the bodies of all the kings of Leon, from Alfonso IV. surnamed the monk, to Bermudo III. the last king of Leon, together with the ashes of Ferdinand I. in whom the crowns of Castille and Leon were first united, and who died in the year 1067. Their library contains many valuable manuscripts.

The *Casa real de San Marcos* has a prior and sixteen canons, supported by a revenue of eighty thousand ducats, or about £8,789, per annum. The front of this religious house merits particular attention by all who visit Leon. Various pieces of sculpture in basso relievo are elegant, and highly finished. Two of these represent the Crucifixion, and the Taking down from the cross. But one of the most striking figures, with respect to design, execution, and expression, is San Jago on horseback.

All the churches in this city, like those of Arragon, are crowded with pillars, and these pillars, nearly hid with most preposterous or-

naments, such as vines, cherubs, angels, and birds, which are covered entirely with gold.

Leon, destitute of commerce, is supported by the church. Beggars abound in every street, all fed by the convents, and at the bishop's palace. Here they get their breakfast, there they dine. Besides food, at San Marcos they receive every other day, the men a farthing, the women and children half as much. On this provision they live, they marry, and they perpetuate a miserable race. An *hospicio*, or general work-house, is almost ready to receive them; but should alms continue to be thus distributed, precisely the same number of lazy wretches, will in time, rise up to occupy the place of those who shall be sent into confinement.

The surrounding country is bold and beautiful, but ill cultivated. It is watered by the Torio and Vernesga, two little streams, which unite below the city. These in summer might be called brooks, in winter they are torrents.

With the rolling stones, hurried down from the mountains, by the impetuous raging of these torrents on the sudden melting of the winter's snow, a considerable part of the wall is built; forming a valuable collection for the naturalist, who wishes, without labour, to investigate the nature of the country. Among these, are found limestone, schist, and grit. All these prove, by their extraneous fossils, that the hills, from whence they come, were once in a state of dissolution, and covered by the sea. The best marble is brought from Nozedo, Robles, and Lillo. The two first are distant five, the latter eleven leagues from Leon.

All the corn mills of this country have horizontal water-wheels.

Butchers' meat is nearly half the price which is given at Madrid.

Beef sells for nine quarts the pound, of twenty ounces; which is a fraction under two pence sterling, the pound of sixteen ounces.

Mutton, ten quarts ditto.

Bread, four quarts (or 1¼ penny) the pound of sixteen ounces; ditto, mixed with rye, 2½ quarts, or ⅘ of a penny ditto.

Labour is three reals, or a small fraction more than seven pence a day; but artisans get double.

Tuesday, 1st August, having spent three days with our hospitable canon, we left Leon; my young friend and his attendant mounted on horses sent for him by his father, I on a good hired mule. We were escorted by some gentlemen who were related to my friend.

Our intention was to sleep at a convent, in a little village five leagues from Leon, called *Terras de las Duenas*. For this purpose, we began our journey at four in the afternoon, passing along the valley by the side of the Vernesga, and ascending towards the mountains, yet meeting nothing remarkable but large tumblers of grit or sandstone, till eleven in the evening, when, after riding smartly seven hours, we fell down upon our destined village.

Unfortunately for us, the nuns were gone to bed, and the porter would neither give us admittance, nor assist us with provisions. Having counted upon being, as usual, entertained for money at the convent, we had brought nothing with us; and instead of lively conversation with the lady abbess, who is famed for the sprightly sallies of her wit, instead of good wine, preceded by a good supper, and followed by good beds, we were obliged to retire without any thing to eat or drink but chocolate,

to a miserable hovel in the village, called a posada, where we however found two beds.

This adventure, from one circumstance, gave me peculiar pleasure, as thereby I had occasion to admire the generosity of my Spanish friends, who all occupied one bed, and left the other wholly to the stranger.

Early the next morning we took our chocolate, and pursued our journey, winding through the gorges of the mountains, and descending with the Luna, a little river famous for its trout.

These mountains are of schist, capped with marble.

As we advance, the rocks become more bold, the schist disappears, and the *marble* rises to the height of three or four hundred feet, often perpendicular, but sometimes overhanging to a considerable extent.

In every little opening of the mountains, wherever a valley spreads wide enough to afford pasture for some cows, we find a village of ten, fifteen, or twenty houses; their numbers always bearing proportion to the quantity of food; and as the human race every where makes strong efforts to increase, we find the inhabitants climbing the steep ascent, to cultivate every spot where the plough can pass.

Here most evidently their numbers must be limited, because their food is so; and were they to establish a community of goods, they must either cast lots who should emigrate, or they must all starve together: unless they chose rather to agree, that two only in every family should marry, and when a cottage became vacant, could find means to settle which of the expectants should unite to take possession of it.

This subject will be renewed whenever occasion shall present; but I have chosen thus briefly to discuss it in this place, because it is here

confined within narrow limits, and being, like the first elements of every science, easily comprehended, may assist us in pursuing our researches on the extent of population, where its combinations are not quite so obvious.

In these little valleys, flocks of goats shew the nature of the adjacent country.

After winding among these bare and rugged mountains nearly five leagues, exposed to a scorching sun, almost suffocated with heat, weary, and ready to faint for want of air, we came under the shadow of a great rock, which, on account of its reviving freshness, we quitted with reluctance, and called to mind a poetic image, the force of which I had never felt before. The deepness of the shade, its vast extent, the distance from reflected heat, together with that degree of humidity, which is needful to absorb and make latent the heat of the surrounding atmosphere, all this, and more than this, we find in one poetic image, "The shadow of a great rock in a weary land."

In more ways than one this rock gave employment to my thoughts. It was a grit or sandstone, remarkable for whiteness and the firmness of its grain. Had it been either schist or limestone, or had I found granite in the vicinity, I should not have been particularly struck with this rock; but upon finding grit, a wish arises in the mind to know from whence it came. That grit originates in *decomposed granite* I have no doubt; but then near to these mountains I can find no granite. This difficulty is not confined to the rock, under whose shade these reflections rose up in my mind, it equally occurs in every country, but in no one is more striking than upon the Wiltshire downs, more especially, near Aubury and

Kennet, in the neighbourhood of Marlborough, where the great rolling stones of grit, called sarcen and greywhethers, cover the chalk to a great extent. Such phœnomena will be the subject of a future discussion; but, for the present, it is time to turn our back upon this rock.

About the middle of the day we came to a village, called Truova na, consisting of twenty-two miserable cottages, belonging to the monks of the Escurial. We dined at their farm-house, where bread is provided for their shepherds. The flock consists of twenty-eight thousand sheep, which in the summer feed upon these mountains, but in the winter travel to the south. To tend this flock, they employ two hundred shepherds; and for the purpose of feeding these, they have a little mill, with a horizontal water-wheel, working day and night, and an oven which is never cold, baking bread in the morning for the shepherds, and in the evening for their dogs.

The situation of this village is most romantic. It is a plain of no great extent, well wooded, well watered, and shut in by high mountains of marble, whose bare and rugged cliffs form a striking contrast with the rich verdure of the meadows, and of luxuriant crops of corn, whilst the images reflected from the smooth surface of a river, gliding near the village, give a brilliancy and perfection to the whole.

The elm, the ash, the poplar, and wild berberries, appear to be the trees most suited to the soil.

The natural beauties of the place, made amends for the coarseness of our fare. Had we proceeded, half a mile, to Villasetano, we should have been not only received with hospitality, but entertained with elegance, by Don Ignatio Horenzano, lord of the village.

His habitation is rather neat than magnificent, but the situation is perfectly enchanting; much resembling Truovana, only it is upon a larger scale. It is not possible to see meadows better watered, or richer than those of this delightful vale.

Notwithstanding we had so lately dined, we were compelled to eat some cakes, with sweetmeats, and to drink some wine. When we had finished our refreshment, we found it difficult to get away without taking up our lodging for the night; but, as it was not consistent with our plan to stay, we hastened our departure, and proceeding along a valley, which is no where wider than four hundred yards, and shut in by high mountains, we followed the winding of a river to Piedrafita, where, in the house of Don Cortheca Garcia de Atocha, we had no reason to repent our having declined the pressing invitations at Villasetano.

Piedrafita, a little village containing forty-six houses, is fed by a little valley, and surrounded on every side by mountains. The shepherds' dogs are large and strong, well qualified to engage the wolves, which are here in great abundance. They wear a spiked collar to protect the neck, and to prevent the wolf from fixing on that mortal part.

It is curious to see the women churning, as they walk along, or stand chatting with a neighbour, each with a leather bag, in which they shake the cream till the butter is completely formed.

From this village we did not take the direct road to Oviedo, being diverted from the usual route by a work of piety, to be performed in compliance with a vow made, by the mother of my friend with

her departing breath. This son, her first born, was then at Barcelona with his regiment, but although absent she bound him with a solemn vow, that before he should return into his native province, he should prostrate himself before the altar of *nostra Senora de Carrasconte*, where he should pay four reals for a mass, and give twenty to the poor. To fulfil this intention, we ascended many miles among the mountains, till we reached a little village almost lost in clouds, from whence, having accomplished the fond parent's vow, we returned by the same way, about one league, to find the proper road.

Among these mountains I was exceedingly surprized to see, on the third of August, snow still remaining undissolved, and not far removed from luxuriant crops of corn then fully ripe, and bending to the sickle.

All the dogs in the little villages through which we pass, have spiked collars. These are absolutely needful, because wolves abound in these elevated regions. In winter they become ravenous and bold; but even in summer they commit frequent ravages among the flocks by night, if either the shepherd or his dog are sleeping soundly.

The basis of all these mountains is schist, every where covered with limestone, chiefly blue. The rocks are wonderfully rent; the strata are inclined in every possible direction; and the whole country appears to have been convulsed. Sometimes the schist appears elevated above the level of the adjacent mountains, still capped with its limestone; at other times the inferior mountains seem to be all of limestone, yet in the deep ravines they discover schist; but upon none of them do we find the least trace of granite.

At the Puerto de Somiedo, where the waters part, are a few miserable cottages, which give name to the pass.

From this we descend by a deep ravine, which discovers its native schist, but hurries down from above vast rocks of limestone charged with fossil shells. Here we find ourselves ingulphed as it were to the right and left by stupendous rocks; but where the country opens to the north, we look down upon mountains beyond mountains, to the distance of many miles, and so astonishingly numerous, that the whole bears a perfect resemblance to the ocean, when it is vexed with a furious storm. Immediately before us, the little village of Gua appears as if ready to be swallowed up and buried by the waves. The impending rocks are magnificent beyond description.

Lower down, at the distance of a mile, is *La Pola de Somiedo*, a village of one and twenty cottages, occupying a small eminence, surrounded by about four-score acres of well watered meadows, and shut in by limestone rocks of a most stupendous height. Had Shakspeare ever passed this way, his imagination would never have looked towards Dover cliff. This village, with its meadows, the little river, and high mountains, either naked and almost perpendicular, or covered with hanging woods, the goats leaping from rock to rock, and the cattle feeding peaceably below, these altogether make a pleasing picture.

I had sufficient time to exercise both my imagination and my pencil, for in this charming village we could get neither bread nor meat, nor eggs nor wine: as for meat and wine, these are delicacies they seldom taste.

The ravine, through which our little river winds its course, alternately widens and contracts, being sometimes not more than two yards across, but, even where it is widest, never more than six hundred feet; sometimes sloping, and leaving a few acres for cultivation; at other times steep, and inaccessible, except to goats; often rugged and bare, but not unfrequently covered thick with a variety of trees, such as oak, ash, beech, filberts, walnuts, chesnuts, and that even where they have no visible soil in which to fix their roots. The rocks themselves are beautiful, more especially when the smooth *white marble* is almost hid by foliage. Nearer to the water's edge, plums, mulberries, and figs, vary the scene, and mark the vicinity to some little village. The way among these rocks is wild, beyond all imagination; sometimes in the bottom and by the river's side, at other times climbing the steep ascent, or descending from the heights, having on one hand a precipice of two or three hundred feet beneath, and on the other impending rocks, which threaten destruction to the traveller. Sometimes the river is pinched in between two rocks, and is out of sight; at other times a man looks down, and catches a glimpse of it sparkling among the branches, but, whether visible or invisible, it is always heard roaring in the bottom. The way being rugged, and so narrow as to admit only of one mule, occasions the apprehension of danger to be often more than a balance, for the pleasure which would otherwise arise from these wild and most romantic views.

Near the level of the river, at the distance of two leagues from the Pola de Somiedo, the *marble* is charged with belemnites; but soon after the limestone disappears, being succeeded by the grit, or

sandstone, some finely granulated, and almost equal to the Turkey stone for smoothness; other coarse, and evidently composed of fragments, being brecia or a species of pudding-stone, with both cement and charge silicious.

At the end of four leagues, or a little more than four hours' riding, we came to *S. Andres de Aguera*, being still in the same ravine, which here expands, and admits of more extensive villages.

To descend into the Asturias, from the kingdoms of Castille and Leon, there are other passes; but, I apprehend, every one of them is strong.

From this circumstance we may readily conceive, not only why the Moors, who, in three years, had subdued the rest of Spain, could penetrate no further to the north, but why, upon the turning of the tide, the vanquished never failed to make an impression, and to push forward their conquests to the south. (A. D. 700 and 711) The jealousy of two weak and vicious princes had disarmed the nation, and left nothing to resist the impetuosity of its fierce invaders, who, with their light cavalry, scoured all the open country, and displayed their victorious banners on the banks of all the principal rivers in the kingdom. But when they came to this chain of mountains, which, stretching east and west, and separating the north of Gallicia, with the Asturias, Biscay, and Guipuscoa, from the rest of Spain, had impeded the progress of nations equally warlike, of the Carthaginians, the Romans, and the Goths, their light horse became absolutely useless, and the Moors were obliged to set bounds to their ambition.

Here they were opposed by the infant Don Palayo. (A. D. 1714) On the death of Rodrigo, who was slain in battle before Xeres, not far

from Cadiz, this prince had retired to the mountains, and by his valour, secured the small remains of a vast empire for his posterity. And here, the hardy race was formed, which, in succeeding ages, descended on the degenerate offspring of the Moors, drove them from the plains, and, in process of time, that is, after a contest of seven hundred and eighty years, expelled them from every fortress in the kingdom.

When we came to *S. Andres de Aguera*, we took up our lodging at the parsonage, where the good *Padre Cura* gave us a most hospitable reception. This living was given him by the bishop of Oviedo, and is reckoned one of the best in his disposal. The parsonage is a tolerable cottage, built and fitted up with little regard to comfort, and less to appearance. Ascending five steps of unhewn stone, you enter a dark vestibule of about three feet square, which leads to the little kitchen on the left, or, if turning to the right, it conducts you to the hall. The former needs no description; the latter is fourteen feet by twelve, with a rough floor, white walls, no ceiling; the furniture is an oak table, and two benches. This hall communicates with the study, a little room six feet by five; and with the bed chamber, which is six feet square, but this has no window, being placed between the study and the vestibule. Under the study is a cellar, well stored with bags of wine, to which you descend through a trap-door of small dimensions. The two maids sleep in a little bed-room joining to their kitchen, and the assistant-priest in a little hovel out of the house, that, if sent for in the night, he may rise without disturbing the good rector.

As soon as we arrived, we had chocolate and biscuits; at night some fat fowls, with plenty of good wine, made us amends for our sufferings

at noon. The best bed was given to the stranger, and the hospitable priest contrived some how or other to lodge all the rest.

The day following was Friday, and therefore a fast; but that made no difference to me, for this young priest was so polite and attentive as to provide a fowl. At dinner, he gave me occasion to admire his discretion: he wished me to taste the trout, as being the produce of the Luna, a river remarkable for trout; but the *homme d'affaire* of my young friend, pulled away the dish, and said, "He cannot eat fish, because he has been eating flesh." "True," said the priest, "we catholics must not touch fish on a fast day, if we have been eating flesh, but your friend is under no such obligation."

This parish contains one hundred and fifty families, consisting of seven hundred communicants, besides children under ten years old, scattered in nine little villages, of which seven are on the mountains, and two in this valley. With so many villages, the occasional duty is exceedingly severe in winter, when the whole country is covered deep with snow. The births are thirty, and the burials twenty-five, upon the average.

A little lower down the valley stands *Aguerina*, where we see the habitation of Cardinal Cienfuegos, with the little cottage in which he was born; but no modern cardinal would pass a day in either.

Upon all these mountains the people affect brown cloth, and the women spin with a distaff. Their industry is most striking; not as the offspring of luxury, as in more favoured regions, but as the child of poverty and of severe necessity. Not one accessible spot is left uncultivated, and even the most ungrateful soil is forced to pay some tribute. The higher lands are sown with wheat, the lower lands with Indian corn.

The rock here is limestone, and when burnt, is their principal manure.

In this country, as much land as a pair of oxen can plough in a day, or, about half an acre, is worth one hundred ducats, or eleven pounds sterling, nearly; and the rent of this, they reckon, should be one fanega of wheat, or fifty six pounds of bread, of twenty-four ounces to the pound.

Having nothing else to do, I amused myself with making drawings of Aguera and of Aguerina; after which, I went with our good rector to his church, to view the body of S. Fructuoso. It is to this body, that thieves and murderers fly for protection from the avenging sword; and should they even reach the porch before they are taken, justice is disarmed, and they may here dwell in safety. The church, indeed, may give them up, but not to death. Such an asylum in the Asturias does little harm, because the inhabitants excel in gentleness and simplicity of manners; but, in other provinces, this privilege is attended with the most fatal consequences.

On the mountains, I am told, are not only wolves, but bears, and a species of the tiger; all which, in the winter, are exceedingly ferocious. From the dread of these, the shepherds constantly drive their flocks, consisting of sheep and goats, into the villages by night; and when they are feeding on the mountains, they are attended by strong dogs with spiked collars.

The price of provisions.

Beef, eight quarts a pound of twenty-four ounces, which is three halfpence for sixteen ounces.

Mutton, ten quarts, or $1\frac{7}{8}$ penny for sixteen ounces.
Bread, five quarts, or $\frac{30}{32}$ penny ditto.
Labour, four reals, or $9\frac{3}{16}$ penny a day.

Saturday, *5th August*, we left Aguera at four in the morning, and continued to descend three leagues in the same ravine, which might here be called a valley, and by the side of the same rapid stream, which we had traced from its origin, near the summit of this vast chain of mountains. At a most romantic spot, called *Belmonte*, we passed over to the east, quitted the ravine, and began crossing all the masures of the country. Here we found nearly the same trees as in the few preceding days; the filbert, chesnut, walnut, and the oak.

Ascending for near an hour, we reached the summit of a mountain, which commands a vast extent of country. This sudden change, after having been so long confined within the precincts of a deep ravine, was like a resurrection from the dead. We began to breathe more freely, and looked round with pleasure, to contemplate a new world before us; the little hills clothed with corn, or covered with wood, seemed to rejoice on every side; and the whole country, with its verdure, its inclosures, and its produce, resembled some of the richest parishes of England.

The prevailing rock is limestone; yet we find schist even on the highest of these hills.

About the middle of the day, we descended to a circular plain of considerable extent, every where shut in by mountains, and watered by a little stream, on the banks of which, nearly in the centre of the

plain, is the village of *Grado*. From hence, after dinner, passing with the river between two high rocks, we pursued our way for some time, along contracted valleys, then climbing from hill to hill we entered the fertile plain, at the head of which stands the city of Oviedo, and about sun-set, arrived at the bishop's palace, the place of our destination.

The expenses of this journey were as follow:

A calasine to Valladolid, being thirty-two leagues, or about one hundred and sixty miles, reckoned at five days out, one for rest, and four for return, in all ten days, with fee to the driver, two hundred and eighty-four reals.

Ditto to Leon, for half a calash, one hundred reals.

A mule to Oviedo, five days, and return, one hundred and twenty reals.

Provisions from Madrid to Oviedo, one-third, being my proportion, two hundred and seventy-two reals. The whole expense therefore, in sterling, was £7. 14*s*. 7½*d*. for a journey, which, if direct, would have been eighty-two leagues, but which, as I suppose, we made more than ninety leagues, or about four hundred and fifty miles, and in which, as we travelled, we employed fifteen days. The common expense, in this part of Spain, may be reckoned, for a calasine, 5*s*. 6*d*. a day, allowing as much for the return, and about five shillings a day for living, not including the calisero, who pays for himself.

JOURNEY

THROUGH

THE ASTURIAS.

OVIEDO, the capital of the Asturias, stands near the conflux of two little rivers, which pour their water into the Bay of Biscay, at Villaviciosa. It was built by Froila, or Fruela, the son of Alfonso I. surnamed El Catolico, and made the seat of his dominion. This city contains one thousand five hundred and sixty families, and has five thousand eight hundred and ninety-five communicants, besides children under ten years of age, who are computed to be about one thousand six hundred; so that the whole population being seven thousand four hundred and ninety-five, they are not five to a family. It has four parish churches, eight chapels, six convents, and a sufficient number of priests, with a bishop, his auxiliary, and thirty-six canons. The bishopric is worth sixty thousand ducats, and the chapter is reckoned

eighty thousand; the former being equal to £6,591. 15*s.* 11½*d.* and the latter £8,789. 1*s.* 3*d.* per annum.

The family where I took up my abode, was that of the auxiliary bishop. He is more than six feet two inches high, very stout, remarkably well-made, handsome, youthful in his appearance, cheerful, and active, although, considerably more than three-score years of age. He is humane, charitable, and most hospitable. His manner is easy, and his conversation lively. The title given to him is "Most Illustrious;" and upon the first approach to him, you bend the knee, and kiss his ring, having previously received his benediction, signified by crossing with his right hand.

His palace is far from elegant, yet by no means uncomfortable. You enter by the coach-house, and from thence pass through a door into the stable, or up the staircase to the dwelling, which is over these. When ascended, you go through a kind of gallery, or lobby, to the bishop's apartments, consisting of a drawing room of about thirty by eighteen, a little study, and a corresponding bed-room. The dining room is about twenty-four by twenty-two, and not far from it is the little kitchen, with a few bed-rooms in the intermediate space. The whole has white walls, and ill-jointed floors. The chairs and the long table are of oak.

If the palace itself is plain; the style of living is still more remarkable for its simplicity: enough for comfort, although little for luxury, and less for ostentation. Our dinner commonly consisted of a sopa, or bread stewed in broth, followed by an olla, composed of beef and mutton, a bit of bacon, and some sausages, with garvanzos, or large

Spanish peas. (cicer arietinum) At other tables they add veal and fowls. This was succeeded by some kind of roast meat, or game; and fish, in some shape or other, brought up the rear. On Wednesdays and Fridays, the bishop and his family dined on bacalao and salt-fish, in a state of decay, but he always provided butcher's meat for the stranger, who as a protestant was at liberty to eat them; every morning and evening, instead of tea, chocolate, with Naples' biscuits, was handed round.

The good bishop filled up his mornings with the duties and functions of his office; after dinner he took his siesta; then either rode or walked; and in the evenings conversed with his friends, who assembled round him.

At one of these conversations, the bishop said to me, "Tell me candidly, what do you think of Spain?" I answered it is a sleeping giant. He was struck exceedingly and to all the company which he saw, for many days, he never failed to mention this.

Another evening he gave me an account of his last visitation. On the whole he was satisfied with the state of his diocese: but he informed me, that one circumstance had occasioned him much distress. He had met with one of his curates, a man of amiable disposition, who had six little children playing on his knees. The bishop said to him, "Young man, I feel for the infirmities of human nature; but at all events, scandal must be avoided. These children must not remain under the same roof with you." He then talked to me about my children, and assured me, that the celibacy of the clergy was not a law of the church, but a regulation, to secure the whole attention of the clergy to their pastoral function.

His family consisted of his chaplain, his secretary, and two pages; besides these, his nephew, who is one of the canons, lived with him, and his great nephew, my travelling companion, then, a cadet, now General Ponte y Oviedo, was occasionally there. The pages wait at his table, and attend him when he goes from home. The remainder of their time is occupied with studies, and when qualified they rise into the priesthood, and, admitted to the table, become companions, till a living offers, to which the bishop can present them. The *padre cura*, that is, the rector of S. Andres de Aguera, had been one of these, and whilst I was at Oviedo, an amiable young page was ordained priest, said his first mass, and sat down with us at table.

In the bishop's palace my reception was most hospitable: every want was provided for with most astonishing benevolence. All the time I was an inmate in his family, care was taken not to shock my prejudices, and every thing that could offend the eye, or ear of a protestant, was kept out of sight.

Having been recommended by Count Campomanes to the Intendant, I sometimes, with the canon, frequented his *tertulla*, or evening assembly, where I never failed to meet the Count de Penalba, a friend of Campomanes. Here I found two apartments, one for cards, the other for conversation; both neat; the former spacious and well-proportioned. The company assembled in the card room was numerous; their game was lottery, a game requiring neither judgment nor memory; but the room for conversation was deserted. The count indeed was so polite as to quit the card-table; but as I felt that I had no right to expect such a sacrifice, I staid only a short time, and then either tormented the bishop,

who was no Frenchman, with my miserable Spanish, or, when I thought I had sufficiently trespassed on his goodness, I retired to my room.

A few days after my arrival, I was present at a grand procession of the bishop, with his canons, attended by the principal inhabitants, carrying torches, and preceded by the ashes of Santa Eulalia, to implore rain from heaven. But this patroness of the diocese, deaf to their petitions, would not intercede for one refreshing shower, and in consequence, the maize was scorched up, and produced but little grain. Being at the time in blossom, it required daily showers to prevent the blight.

From the frequency of processions, the consumption of wax becomes considerable in every part of Spain, more especially where the country is not watered, either by rivers, or by the noria. But I am inclined to think, that the same expense, if properly applied, would, in most places, secure a never-failing supply of water, and pay good interest for the capital employed. Government is sensible of this, and with a view to watering, as well as to navigation, encourages the canals, not as with us, by leaving this most important work to private adventurers, but as a national concern, at the national expense.

After the procession, I went to visit the *Hospicio*, or general workhouse, and found the numbers confined, to be, men, sixty-five; boys, fifty-five; women, ninety; girls, seventy; not including infants out at nurse. The house is large and commodious, consisting of four spacious quadrangles, three stories high, and perfectly well fitted up, with comfortable work-rooms and dormitories. Some of these I found two hundred and fifty feet in length, lofty and wide. To support this establishment, the funds are thirty thousand ducats annually, arising from licenses to sell brandy

in the Asturias; three thousand from rents of land; and some other emoluments; being together equal to four thousand pounds sterling, besides the produce of their labour, which is stated at three thousand reals, or thirty pounds per annum, including what they make for their own consumption. Among the two hundred and eighty persons shut up in this hospicio, I saw no cripples, so that their labour may be fairly reckoned at two shillings and three halfpence each, per annum. The expense of every pauper to the public, is not so easily calculated, because they receive all deserted children. Here the mother has nothing to do, but to put the child into the cradle, ring the bell, and then retire.

Besides this refuge for the poor, and for their children, the bishop causes seventy reals to be distributed every morning at his gates, giving either a quarto or an ochavo to all who come, and weekly pensions both to widows and to orphans. In addition to all this, the canons scatter their alms plentifully as they walk the streets; and the six convents administer bread and broth at noon, more especially the Benedictines, who, as the most wealthy, are most liberal in their donations. When sick, the poor have a commodious hospital always ready to receive them.

Notwithstanding all that has been done, and what more in the way of charity can be devised? beggars, clothed in rags, and covered with vermin, swarm in every street. Is it not therefore evident, that they have done too much, increasing both the numbers and the distresses of the poor by the very means, which have been employed to relieve their wants.

What incitement can we here find to industry? for, who will dig a

well when he may draw water from the fountain? Is he hungry? the monasteries will feed him. Is he sick? an hospital stands open to receive him. Has he children? he need not labour to support them; they are well provided for without his care. Is he too lazy to go in search of food? he need only retire to the hospicio.

Dry up the fountain, and every man will instantly begin to dig a well; burn the hospicio, or dissipate its funds; give no relief but as a reward, that it may prove a stimulus to industry, and although at first the distress will be increased, and the population will be diminished, yet, as the fruit of that industry, which can spring only from distress, the population will afterwards advance in a constant and regular progression; wealth will be diffused; and distress will be confined to the cottage of the slothful.

I was exceedingly pleased with the answer of the bishop, when I one day took the liberty to ask him, if he did not think he was doing harm by the distribution of alms. "Most undoubtedly," said he, "But then it is the part of the magistrate to clear the streets of beggars; it is my duty to give alms to all that ask."

Among the widows pensioned by the bishop, were many who had lived in affluence whilst they had husbands. These were the widows of lawyers, who are numerous, and spend all their gains.

I went afterwards with Don Antonio Durand, and Don Francisco Loca, to visit the hospital, of which the former is physician, the latter, surgeon. The most remarkable cases were, tertians, dropsies, and a disease peculiar to this province, called *Mal de la Rosa*.

The tertians were only remarkable, as yielding to the lancet, followed by emetics, cathartics, and the bark. Perhaps the latter were the really efficacious remedies, and all the merit of the former might be merely negative. The dropsies were soon cured by cathartics, and abstinence from drink, allowing no liquid, but half a pint of wine in twenty-four hours.

The *Mal de Rosa* has been considered as a species of the leprosy; but to me it appears to have no affinity with that disease. It attacks the back of the hands, the insteps, and the neck, where it descends the sternum, almost to the cartilago ziphoides, but the rest of the body is free. At first it appears red, accompanied with pain and heat, but ends in scurf. In the progress of this disease, vertigo and delirium succeed, with foul tongue, lassitude, chilliness, tears, and, according to the testimony of Dr. Durand, a peculiar propensity to drown themselves. It goes away in summer, and returns in spring. The disease may be cured by nitre and gentle cathartics; but, if neglected, it terminates in scrophula, marasma, melancholy, and madness.

At Oviedo, as in most of the great towns in Spain, an hospital for the lues is opened three times in the year, to receive as many as the hospital will hold; but the surgeons all over the peninsula complain that patients are tardy in their application. This may arise either from the violence of their treatment, or from the mildness of the symptoms; but whatever cause may be assigned, the consequence is, the universal prevalence of that complaint.

The diseases which seem to be endemical in the Asturias, are,

intermittents, dropsies, hysteria, hypochondriasis, scrophula, bronchocele, glandular obstructions, cachexies, scurvy, leprosy, madness, epilepsy, attended with worms, apoplexy, and palsy, rheumatism, phthisis, and erisipelas, with the mal de rosa, and the sarna, or the itch.

For the leprosy they have in the Asturias twenty hospitals, called *Lazaros*. It appears in various forms. Some patients are covered over with a white dry scurf, and look like millers; in others the skin is almost black, very thick, full of wrinkles, unctuous, and covered with a loathsome crust; others have one leg and thigh enormously swelled, and full of varices, pustules, and ulcers, sending forth a most abominable smell. All complain of heat, with most intolerable itching. Some patients, instead of the great leg, have a most enormous swelling of one hand, more especially the female subjects, or else have the features of the face swoln to such a degree, as hardly to retain the human form; others again have carbuncles, big as hazel nuts, all over the surface of their body.

The common itch (scabies) is little less disgusting than the leprosy, thus transiently described. It usually attacks the heads of children, and is attended with ulcers of the foulest nature, itching intolerable, and lice innumerable. It is commonly preceded by horripilation and a frebricula, which terminate in the expulsion of numerous little pimples, like the small-pox. These, in healthy subjects, are large, pointed, red, quickly suppurating; but at the end of nine or ten months they go away. Bad subjects have this disease for life. The females are more exposed to it than males.

Agues, fevers, and even pleurisies, are said often to terminate in scabies, and this frequently gives place to them, returning however when the fever ceases. In adults it takes possession of the hands and arms, with the legs and thighs; covering them with a filthy crust. In wet weather the itching becomes more troublesome, and towards midnight is insupportable. The patients, who labour under this disease, breed sirones, a kind of vermin exceedingly minute, yet visible without the assistance of a lens, which form channels between the cuticle and the skin.

The predisposing cause of all these diseases may be sought for in humidity, arising from the peculiar situation of this province. This hilly country, bounded on the north by the Bay of Biscay, and to the south by snowy mountains, is always temperate, and generally moist. The N. E. wind indeed is dry, attended with a bright sky, and with a bracing air, but with every other wind the sun is obscured by clouds. The north wind always produces the most dreadful tempests, and the N. W. is little better; both bring rain in summer, and the west wind comes loaded at all times with moisture from the Atlantic Ocean. In May, June, and July, they seldom see the sun; but then, to balance this, in August and September, they as seldom see a cloud. The coast is temperate, and comparatively free from rain; but such is the moisture of the hills, that no care is sufficient to preserve their fruits, their grain, their instruments of iron, from mould, from rot, from rust. Both the acetous and the putrid fermentation here make a rapid progress.

Besides the relaxing humidity of the climate, the common food of the inhabitants contributes much to the prevalence of most diseases, which infest this principality. They eat little flesh; they drink little wine. Their usual diet is Indian corn, with beans, peas, chesnuts, apples, pears, melons, and cucumbers; and even their bread, made of Indian corn, has neither barm nor leaven, but is unfermented, and in the state of dough. Their drink is water.

This account, collected from gentlemen of the profession, is confirmed in the valuable work of Don Caspar Cassal, an old physician, of more than common observation and experience, who has given to the public a natural history of the Asturias.

Although subject to such a variety of endemical diseases, few countries can produce more examples of longevity. Many live to the age of a hundred, some to a hundred and ten, and others much longer. The same observation may be extended to Gallicia, where in the parish of St Juan de Poyo, A. D. 1724, the curate administered the sacrament to thirteen persons, whose ages together made one thousand four hundred and ninety-nine, the youngest of these being one hundred and ten, and the oldest one hundred and twenty seven. But in Villa de Fofinapes, one Juan de Outeyro, a poor labourer, died in the year 1726, aged more than one hundred and forty-six years.

When we consider the temperature of the climate, arising from its humidity, together with the cooling winds from the Atlantic, and from the snowy mountains, we must naturally expect to find instances of protracted age, with the prevalence of chronical complaints, and of such maladies as are seldom mortal; whereas, in warmer and in drier climates,

nature comes sooner to maturity, is subject to more acute diseases, and like combustibles, when burning with a vivid flame, is rapidly consumed.

The physician reported a case too singular to be easily forgotten: a young man, aged twenty-eight, complaining of a fever, was bled twice without relief; and having some symptoms which indicated a different treatment, they gave him a bitter purge, which brought from him, in one day, one hundred and seventy-three large worms (the *teretes.*) Five days after this he passed one hundred twenty-four, and the next day seventy-three, and died.

From the general hospital, I went with Don Nicolas Trelles to visit an hospital for pilgrims, of which he is chaplain and confessor. It is a miserable building, with a wretched hall, and numerous cells, by way of bed-rooms. Here, pilgrims from every quarter of the globe, who are going to prostrate themselves before the altar of S. Jago, in Gallicia, are received and lodged for three nights. When they arrive in Oviedo, they present themselves before one particular altar, and receive every man ten *quartos.* Should he chance to die here, he is buried with more pomp than the first nobleman of the province, and is attended by all the canons to the grave.

The rage for pilgrimage is much abated; but there are people living, who remember when it was the fashion for all young men of spirit, both in Italy and France, before they married, to go as pilgrims to S. Jago; and even now, it is not uncommon to see straggling, some few old men, and many companies of young ones, pursuing the same route. We met twelve fine-made fellows, who came from Navarre, singing the rosary, and hastening towards the next convent, where they expected to lodge, and receive more money for the journey.

S. Jago, if I am not mistaken, was the first who preached the gospel to the Spaniards; but however this may be, their devotion springs from gratitude; and the reverence of all surrounding nations, who are acquainted with his military fame, is the just reward of his undaunted prowess, when, mounted on a white horse, he appeared in the air fighting against the infidels, and putting them to flight before Ramiro, at the battle of Simancas. (A. D. 927)

The sight of pilgrims naturally reminded me of relics, and excited a curiosity to visit those of the cathedral; and for that purpose, I made application to the bishop, who, the next morning sent his nephew, the canon, to shew me every thing most curious among their treasures. Tradition says, but I do not undertake to vindicate the truth of its report, nor indeed would our good bishop; tradition says, and our good bishop, with becoming modesty, considers it as possible, that when Cosroes, king of Persia, pillaged Jerusalem, God, by his omnipotence, transported a chest of incorruptible wood, made by the immediate followers of the apostles, and filled with relics, from Jerusalem, by way of Africa, to Carthagena, Seville, and Toledo, and from thence, with the infant Don Pelayo, to the sacred mountain near to Oviedo, and finally to the cathedral church of San Salvador. Upon its being opened, by the command of the sovereign Alonzo the Great, in the presence of assembled prelates, they found portions of all the following articles: the Rod of Moses; the Manna which fell from Heaven; the Mantle of Elias; the Bones of the Holy Innocents; the Branch of Olive which Christ bore in his hand when he entered Jerusalem; great part of the true Cross; eight Thorns of his Crown; the Sanctissimo Sudario, or napkin stained with

his blood; the Reed, which he wore by way of sceptre; his Garment; his Sepulchre; the Milk of the Blessed Virgin; the Hood, which she gave to S. Ildefonso, Archbishop of Toledo; one of the three Crucifixes carved by Nicodemus; and a Cross of the purest gold, made by angels in the cathedral.

"Whosoever, called of God, shall visit these precious relics, shall obtain remission of one-third of the punishment due to his sins, with indulgence for a thousand and four years, and six quarantines, &c. &c." Thus at least runs the promise, in the name of the pope, and by authority of the bishop; yet I doubt much, if thus worded, the promise be agreeable to the faith of catholics. All their bishops and men of learning, with whom I have had the honor to converse, have solemnly assured me, that without repentance, and a firm belief in the atonement, no power upon earth can absolve the guilty; and that the church claims no prerogative respecting indulgences, but that of remitting the punishment, which would otherwise be endured in purgatory by those, who shall not have performed the penance appointed by the church for each particular offence. When they promise forty days indulgence, or as many forty days as shall make one thousand and four years, they do not mean absolutely days and years, as if endless duration could be divided into portions, to be measured by the rotation of the earth, for they hold succession to be inconsistent with the idea of eternity; but they mean, if I understand them right, the remission of such a portion, or quantity of punishment as shall be equal to forty days, or one thousand and four years penance, should their lives be protracted to such a period, as would allow them to perform the whole. When the points of difference

between protestants and papists, shall be fairly and distinctly stated, the subjects of dispute will vanish, or at least the contending parties will have the better chance of coming to agreement.

Some days after I had examined all these relics, the *Sanctissimo Sudario*, or sacred napkin, on which the Redeemer, during his passion, impressed his image, was exposed in the cathedral to eight or ten thousand peasants, collected from all the surrounding villages, most of whom had baskets full of cakes and bread, which they elevated as high as possible, the instant the curtain was withdrawn, in the full persuasion that these cakes, thus exposed, would acquire virtue to cure or to alleviate all diseases. Many lifted up their beads, and every one had something or other to receive the divine energy, which he conceived to be constantly proceeding from the sacred image of his Lord. After a few minutes, one of the canons drew the curtain, and the multitude retired.

The monasteries in Oviedo are not highly interesting; yet two of them excited my curiosity; both of them belonging to the Benedictine order. The first of monks, whom I visited for the sake of Father Feyjoo, whose fame has extended to the most distant nations. I went into his cell, and conversed with those, who had revered him living. I examined the features of his bust, but this having been taken when the clay was no longer animated, it was from his works alone that I could form any judgment of his mind. All who are conversant with these, will agree with me in thinking him, for general literature, the first writer of the Spanish nation.

The convent of the Benedictine nuns, I visited chiefly on account of their great wealth. They are only fifty, and their revenue is allowed to be twenty thousand ducats, or £2,197 5s. 3½d. a year. They invited us to tea. I went with the canon and my young friend to their parlour; and they assembled with the lady abbess at the grate. Their conversation was lively, and their behaviour perfectly easy. I ventured to solicit one of them to sing; she was young and handsome, genteel and delicate, and her countenance was highly interesting; but when she began to chaunt a portion of the litany, she made me start; for having long since forgotten all the songs of infancy, and being accustomed to sing only in the choir, her voice was become harsh and grating on the ear. When we took our leave, they invited us to repeat our visit; but my curiosity was satisfied, and my time was short,

The building itself is worthy of attention for its vast extent, and for its elegance.

The person to whom I was chiefly recommended, was the Count of Penalba, a man of good abilities, of gentle manners, and of uncommon information; for a nobleman of Spain.

I went with him to see the hot springs of *Rivera de Abajo*, at the distance of some miles from Oviedo. The situation is most enchanting, in a little valley every where shut in by lofty mountains, excepting only a small outlet for the stream. The rock is limestone, and the waters resemble those of Bath, both in temperature and in taste. The principal spring rises from the rock, and is near two inches in dia-

meter. The baths are ill contrived, and separated by a cold passage from the dressing rooms.

The virtues of these waters have not been ascertained, nor have they been analized; but the cases, in which they have been chiefly recommended, are, rheumatism, palsy, jaundice, and sterility; and for these they are in the highest estimation.

In the centre of the valley, on a little eminence, is a castle with round towers, called *San Juan de Priorio;* and near to it a church, most romantically placed, with a beautiful back ground of oaks and chesnuts.

As we returned, we visited a new manufacture of petroleum, established near the city, according to a plan sent from Paris by Count d'Aranda, and which I understand to be the same with that invented by Lord Dundonald. This will certainly become an object of importance, because *coal* every where abounds in the Asturias, although it has never yet been turned to profit, on account of its abominable smell, arising perhaps from the rock, between which it lies, and the sulphur, with which it is impregnated. It is well known that alcali and sulphur form the liver of sulphur, than which nothing is more offensive to the nostrils. Now the whole province abounds with marl, *chalk, gypsum, oolite,* or calcareous freestone, limestone, *marble;* and the rock, which confines the coal, is wholly calcareous. But should they ever penetrate this stratum, and find the coal in schist, I have no doubt that their coal would cease to be offensive. At present they have not sufficient encouragement to work these mines, because the country abounds with wood, and the preju-

dice against coal is so strong, that men, to whom the multitude look up, have not scrupled to attribute all the consumptive diseases of our island to the prevailing use of coal.

The limestone of this province every where abounds with *fossil shells.*

To the west of Oviedo, the soil is gypseous, but they make no saltpetre, nor is there any sign of nitrous earth.

The trees are, elm, ash, poplars, and a species of the oak, called robles, an appellation perhaps derived from *robur.* In the low lands they get two crops in the year, taking after barley, either maize or flax. Their wheat is very fine.

The ploughs about Oviedo are, without exception, the worst I ever saw, and perhaps the worst which the imagination can conceive. The coulter is fixed in a beam by itself, with two oxen and one man to work it. This goes first; then follows the plough in the same tract, with no iron excepting at the point of the share. The handle is curved, to serve the purpose of sheets, and has a mortice to receive the tenon of the beam, and itself is morticed into the tail of the share. It has a retch to raise and to depress it. The whole is made in the most clumsy manner, and at best can only scratch the ground, which, being mostly strong land, requires to be well ploughed.

The harrows have no iron, and are only used for maize; the wheat and barley being always left unharrowed.

The cart wheel has no spokes, but consists of a wooden ring or felloe, composed of four quadrants, and is bisected by a plank of

about eight or ten inches wide, to receive the axis, which, being fastened to the wheel, turns round with it, making what is called an axis in peritrocheo. Some of these, for heavy work, are bound with iron, and have spike nails with enormous heads. I had the curiosity to measure the axis, and found it commonly more then eight inches diameter, but sometimes ten; yet, I must confess, that I was not surprised at finding this quantity of friction overlooked in the Asturias, having observed so little attention paid to it even in England, where, till within these few years, the large wooden axis was universal; and where, even in the present day, few farmers have adopted iron.

To set any matter in a proper light, it is often necessary to view it in the two opposite extremes. Now it must be evident, that were it possible to have the axis, of the same diameter with the circumference of the wheel; the friction would not be in the least abated, but would, as may be proved, and has been proved by the most accurate experiments, be equal to one-third of the whole weight moving on a smooth surface. Were it possible to reduce the axis to a mathematical line, friction would altogether vanish. Having found the two extremes, the imagination readily seizes a general idea of the proportions which lie between them. Let us however examine these proportions with a more minute attention. It is evident, that in the former case, always supposing the plain to be horizontal, a power more than equal to one ton would be necessary to move three tons; whereas, in the latter case, a fly would give motion to ten thousand tons.

Stating the diameter of the wheels to be four feet, and that of the axis to be eight inches, which are the usual dimensions in the Asturias, something more than one ton would move eighteen tons; but, supposing the wheels to be five feet high, and the diameter of the axis to be two inches and a half, then, something more than one ton would set in motion seventy-two tons, the friction being always directly as the diameter of the axis, and inversely as the diameter of the wheel. Here I must take occasion to observe, that in point of friction, to diminish the axis will be found more advisable than to increase the diameter of the wheel, because the friction will be in proportion to the diameter; whereas, the degree of strength being given, the weight of the wheel will be nearly as the square of the diameter. Whilst the motion is horizontal on a plane, which is perfectly hard; wheels which are high, and consequently heavy, will have no other disadvantage than the superior cost, but on soft roads, and in moving either up hill or down, the weight of the wheels must not be overlooked, nor must the diameter be disregarded. The weight, in both cases tells against the horse; but, as to the diameter, a distinction must be made. Going up hill, in proportion as you elevate the axis above the horse's breast, so as for the line of draft to make an angle with the hill, in the same proportion you lose power. The truth of this proposition may be caught by moving, in imagination, the line of draft up and down in two opposite extremes. Elevate or depress it, till it becomes perpendicular; the whole force of the horse will tell for nothing, and he will act only like a log of wood equal to him in weight. Let the line of draft make an angle of forty-five degrees with the plane, on which the waggon is ascending, and one half of the force will be lost.

In like manner, by the composition and resolution of forces, the exact proportion of loss may be ascertained. In going down hill, the diminution of friction, which is directly as the diameter of the wheels, makes it needful to create new friction by chaining the wheels, or by a sliding piece to prevent their rotation.

In the Asturias, not satisfied with the quantity of friction, arising from a wooden axis of eight inches diameter revolving without grease, they fix two wooden pins, which confine the axis in its place, so near together, that they bind hard against it; and this they do only for the sake of the noise arising from the friction, and which, whilst it appears to lull the oxen, and to incline both them and the driver to sleep, as they move slowly on, is considered as exciting them to labour, and thereby precluding the necessity of either speaking to them, or pricking them with goads. This music, resembling the sound of a post-boy's horn, is heard from morning to night in every part of the Asturias, and, when at a great distance, is not unpleasant even to a stranger, but to the native peasant it appears to be the never-failing source of calm enjoyment.

In this country, oxen supply the place of horses, and consequently beef is cheep, being sold for ten quarts the pound of twenty-four ounces, which is 1⅞ penny for a pound of sixteen ounces; mutton is fourteen quarts for the Asturian pound, or 2⅝ penny for sixteen ounces, including the alcavala, millones, and arbitrio. The bishop tells me, that within his memory provisions were exactly half the present prices. Barley is twenty reals; maize or Indian corn, thirty; French beans, forty; wheat from forty to fifty the fanega, which in the Asturias differs little as I

apprehend, from one English bushel and a half; wheat therefore is from 5*s.* 4*d.* to 6*s.* 8*d.* a bushel, or about 6*s.* on the average.

Monday, *August* 21, I went with my young friend to pay a visit for a few days to his father at *Aviles*, on the sea coast, about five leagues from Oviedo.

The occasion of this visit was to be present at the feria, or church feast, which in catholic countries all over the world, and even among protestants in a degree, gives occasion to much traffic, and is considered as a licentious season.

The road was over the mountains. This they are making at a vast expense, and in a most substantial manner, without the least attention to economy, or to any thing but their own ideas of utility and beauty. For some miles near to Oviedo, and likewise near to Aviles, the road is made perfectly straight, very wide, and rounded in the middle. The foundation is laid with large masses of limestone rock, covered with stones broken to a smaller size; and, to support the arch, which they apprehend would spread like the arches of an edifice, supposing them to have no lateral support, they absolutely build two walls the whole extent of the way. This certainly contributes much to beauty, but not in the least to the principal purpose for which it is designed. The sides of the road being planted with trees, makes it a delightful walk for the inhabitants.

The ambition of Spaniards, in aiming at perfection, is no where more visible than near Aviles. The ancient road turned about two hundred yards, in order to avoid a low and swampy meadow; but now, at a vast expense, they are determined to have a straight and spacious avenue

of near three miles, like those of other cities. From Oviedo to Gijon, a little sea-port to the east of Aviles, they are making another road in the same style, and at similar expense.

Aviles contains eight hundred families, with two parish churches, three convents, and two hospitals, of which one is for old women, the other for pilgrims going to San Jago. They have no manufactures, except of copper and brass pans for the surrounding villages, and of some thread for their own consumption.

Aviles is situated on the bank of a little river, about one league from the sea, but within reach of the tide. It is every where surrounded by hills, which, for the most part, are fertile to their summits, and are either covered with flocks, or shaded by the roble and the chesnut; whilst the low lands are loaded with luxuriant crops of wheat and maize.

The house of my young friend is one of the most commodious I have seen. After the fashion of the country, it is built round a court, but with only half the usual corridor; for commonly this runs all round the court, like that still seen in some of our great old inns. In this house the gallery is wide, and open to the south, and to the morning sun. The ground floor is given up wholly to the servants, except one corner occupied by a chapel. The apartments are, a dining-room, a drawing-room; both spacious and lofty; one to the west, looking to the street, the other to the east, commanding a lovely prospect, which is bounded by the sea; four principal bed-chambers, and others inferior. Of these, two only were single bedded; the rest contained two, three, or upon occasion, four beds; for in Spain, even

in respectable families, three or four gentlemen will occasionally occupy one room.

Custom reconciles to this; and, by the practice of Scotland, France, and Spain, I see clearly, that other nations can be reconciled to that which is most disgusting to an Englishman; and certain it is, by what we see daily in our cottages of the poor peasants, that our olfactory nerves may be reduced to such a degree of torpid insensibility, as to be happy and contented in the midst of filth and nastiness.

In this respect, no nation can surpass the Spaniards; who, without disgust, without regard to decency, when lodging thus together in one room, conceal only by a napkin that, which the French shut up in boxes, and hide in the little closet, where they keep their clothes.

It is curious to observe, at what an early age the amorous affections discover themselves in Spain. My young friend was but fourteen years of age, yet no sooner had we arrived in Aviles, than he became deeply enamoured of a young lady, and extremely jealous of a rival, who seemed to gain a place in her affections.

As agreeably to the Spanish manners, I slept in the same room with him; I became his confidant by night as well as by day, whether he were waking or whether he were sleeping. For all day he talked of her, and all night he dreamt of her, as was evident, because in his sleep he uttered all his thoughts. Young as he was, this was not the first nor the second time, that he had felt the shafts of Cupid. In every part of Spain, where heat prevails, nature makes strong

efforts, and all fruits hasten to maturity. One year you plant a tree, the next you gather fruit from it.

Upon occasion of the church feast or feria, which, by the by, marks the origin of our word *Fair*, the concourse of strangers to Aviles is considerable, and every gentleman opens his house for the reception of his friends. At this season the morning is spent in lounging about to view the shops, the cattle, and the people assembled in the fair; and the evening is closed by dancing. The balls are given by the principal person of the city, and such is the simplicity, which reigns in this distant province, that the servants and peasants are allowed to crowd about the entrance of the room to see the dance. The most favourite dances are the English, the minuet and the country dance; but sometimes they dance the cotillion, and, towards the close of the evening, the fandango.

Sunday, August 27, being the fourth day of the fair, and remarkably fine, the concourse of people, with the multitude of cattle, was surprising, and the market was brisk. As protestants, we must be allowed to wonder at this practice.

Beef here is sold for seven quarts and a half the pound of twenty-four ounces, and mutton eleven; bread, five quarts for the pound of twenty ounces; wheat, thirty-two reals the fanega, which weighs a quintal, and which, if supposed equal to the quintal of Catalonia, will be ninety-two pounds English; barley and maize, twenty-eight reals; beans, thirty-six.

It is striking to observe how corn finds its level all over Europe, whilst butcher's meat, which is not of such easy transport, varies exceedingly in price. Thus, at Aviles, beef is under three-halfpence;

mutton is $2\frac{1}{16}$ pence for a pound of sixteen ounces, whilst bread is 1½ penny for the same weight.

No distinction in price is made between the prime pieces and the coarse, nor between fat meat and lean, because the prices are fixed by the magistrate, without respect to quality. The consequence of this arrangement is, that the meat is never so good as it might be, were the market free.

The government of this city is in two corregidors, four regidors, and a syndic, who is annually chosen by the people to inspect the meat, to vindicate their rights, and take care upon all occasions, that justice shall be done to them.

Whilst I continued at Aviles, I discovered, for the first time, that the visit is always to the lady; that the master of the family is perfectly at liberty to come or go; that there is no necessity to take notice of him; and that, if the daughter is handsomer than her mother, she may, without offence, occupy the whole attention. This idea I found afterwards confirmed in the great metropolis, by seeing gentlemen introduced to the ladies of the first fashion, and visiting them on the most familiar footing, without the least acquaintance, or even personal knowledge, of their husbands.

The science and practice of medicine are at the lowest ebb in Spain, but more especially in the Asturias. *Fiat venesectio* is still the favorite prescription, notwithstanding the ridicule of Le Sage, and the serious reasoning of Feyjoo. When the fond husband meets the physician in the street, and urges him to step in to see his wife, *Sangrado* pulls out at once his list of patients and his watch, tells him

that he cannot stop one moment, orders him instantly to fetch the surgeon, and to have her blooded, promising faithfully to see her in half an hour. Palsies most undoubtedly are frequent, but it is by no means clear, that these are always caused by plethora, although in many cases they certainly originate from fulness. *Sangrado* however has such a dread of palsy, that he bleeds his patient into a dropsy, or leaves him to languish between life and death, a prey to the most gloomy of all diseases, to which humanity is subject.

At the request of the bishop, I visited a friend of his, an old canon, who was threatened with a palsy by his physicians. He had been twice blooded, and the question was, whether he should lose more blood. I went to him immediately, and found him surrounded by his friends, who all stood looking on, expecting every moment to see the fatal stroke, whilst he, sitting in his great arm-chair, apparently in perfect health, yet with a gloomy and dejected countenance, seemed to be waiting for the awful moment, without one ray of hope to cheer his mind. Those of his friends, who could be spared from business, continued with him; his neighbours dropped in to look upon him; but all continued silent, excepting such of them as thought it needful to ask him, from time to time how he felt. No one entered into conversation with him, nor would they suffer him to look into a book. Notwithstanding this repeated venesection, his pulse was remarkably full and strong. He was of a certain age, lived well, and took no exercise. I could not hesitate what advice to give. At my request, the room was cleared; he adopted the vegetable diet, and took exercise. Thus, by degrees, his fears were dissi-

pated, and he returned once more, to join the little circle of his friends in their innocent amusements.

At the desire of my friend at Aviles, I went to visit a monk, who was related to the family, and found the good old man crying with agony of pain, arising from the stone. The physician ordered nothing but Madame Steven's solvent; but this was too slow in its operation, and could give no present ease from pain. I ordered the *Enema Molliens*, by way of warm fomentation, to be used immediately, and to be repeated, if occasion should require; but the first application gave relief, and all the monks crowded round me to consult, each for himself, what would be proper for his complaint. Among all those who came to me, I did not find one, who was not afflicted either with the stone, the gravel, or with the hypochondriacal disease. For this, I could assign no other cause, but their inactive life, and the want of animating hope; both common to the cloistered tribe.

From the monks I was sent for to a convent of nuns, where I was confirmed in my idea, that man is formed not only for social life, for that is found in convents, but for domestic cares. Without a pursuit the mind must languish, and the health will suffer. The two nuns, whose friends had requested my advice, were hectic, and I am satisfied that others, who consulted me, were running the same course. Nature certainly never intended them for nuns. Other considerations apart; the severity of their discipline, their rising at midnight from a warm bed to go into a cold chapel, is ill-suited to the delicacy of the female sex, and must be inevitable ruin to the tender constitution.

I was much pleased with the good sense, and flattered by the confi-

dence, of the lady abbess. When she was describing a diseased breast, and I had said, "If this young lady were my sister, I should desire to see the breast," she answered, "Every lady is sister to the physician who attends her;" and immediately desired the nun to go with me to a parlour. On examination I found it was a cancerous case, and recommended them to make application to a surgeon.

After having passed ten days very pleasantly at Aviles, I went with the Count Penalba to stay as many at *Luanjo*, or, as we should pronounce it, Luanco.

Luanjo has three hundred and seventy houses, and one thousand eight hundred souls, of which, one thousand three hundred go to confession and communion, the other five hundred are infants. It is a little sea-port, and carries on a coasting trade.

The ride from Aviles to Luanjo is chiefly on the sea-coast. When we arrived, the sun was set, and the evening was shut in.

The habitation of the count is massive, chiefly calculated for strength, and to resist the waves, which always wash its solid base, and occasionally breaking against the house, send their foaming spray over the lofty roof into the street. Whilst I was there I was so fortunate as to be witness to this sight. To enter the dwelling, you pass through the coach-house, and find the ground floor given up to stables.

When we arrived, the great hall was already occupied, as usual by the neighbours, who were amusing themselves with cards; but, as we were under no obligation to join the party, which was not of the genteelest cast, we went up stairs, and took possession of a room which occasionally serves for eating.

The family consisted of the count and countess, with their children, his two sisters, and her mother. His brother, a genteel young officer, was there upon a visit. The family being thus numerous, and the greatest portion of the house being occupied with offices, little remained for bed-rooms. These were few in number, and upon a contracted scale. The room, in which I slept, was about eleven feet by fourteen, yet contained two beds, one for me, the other for the brother of the count. The walls are white-limed, the floors are smoothed with the addice, but not one is planed, and I do not recollect one ceiling. The beds have no curtains. The great hall where we dined, is a double cube of about fifty by five and twenty; with these dimensions, if well fitted up, it would be elegant.

The style of living resembled the old British hospitality; and the long oak table, surrounded by strong oak benches, was every day well covered.

I was at first surprised, and much disgusted, with a ragged and half-naked visitor, who came up at dinner time, walked round the table, spoke freely to all the family, but in a manner to me quite unintelligible, sat down occasionally at the bottom of the table, and sometimes seized a bone, then laughed and chattered like a baboon; yet with all this, appeared to give no offence. Upon inquiry, I found that this miserable object was the idiot of the village; and as such, enjoyed the privilege of going where he pleased, and of doing what he pleased, without restraint.

Nothing can exceed their simplicity of manners in this distant province. Polished nations would be offended at their freedom, and the

plainness with which they speak of things, which in the more advanced state of society must not be even hinted at; yet such language neither gives disgust, nor tends to excite the passions. But at the same time familiarities, such as in other countries are esteemed innocent, and, being rightly understood, neither imply nor lead to guilt, would here, and all over Spain, be highly offensive; would, if practised in public, excite universal horror, if in private, level every fence which virtue is engaged to maintain.

They use no paint, no powder, no curls, no cap; nothing but a bit of ribbon bound round the head. In this simplicity of dress, youth and beauty may enjoy their triumph; but the old women, for want of borrowed charms, have nothing which can please the eye. Yet gentlemen are not altogether void of attention to them, nor are they insensible to these attentions. A tradesman of Luanjo had cut his little portion of tobacco, and had rolled it up carefully in a strip of paper, making a cigar about the size of a goose-quill; he had doubled back, and pinched carefully the ends; then with mature deliberation, taking up his steel, his flint, and his little bit of *amadou (boletus ignarius)* he struck a light, kindled his cigar, began to smoke, and finding it work well, he presented it to the countess. She bowed and took it, smoked it half out, and restored it to him again.

After the countess had done with the cigar, and had joined the conversation, in a few minutes she opened her mouth, and sent out a cloud of smoke. She saw my surprise, and asked the cause of it. I told her; and immediately the person who was smoking drew in some hearty whiffs, then opened his mouth to convince me that

nothing continued there, and after many minutes he breathed out volumes of smoke. This I find is their common mode of smoking; and without making it pass through their lungs, they think it useless.

The government of Luanjo is in a corregidor, assisted by eight or ten regidors, and two syndics, who are to protect the people from oppression. These magistrates once a year make a contract with the butcher, who will supply the market cheapest. In consequence of this agreement, beef sells for seven quarts; mutton, ten; bread six per pound of twenty-four ounces. According to this, supposing the pound to be sixteen ounces, beef will be $1\frac{5}{7}$ penny; mutton, $1\frac{1}{5}$; bread, $1\frac{1}{3}$ per pound.

Labour is from three to five reals a day, or, without fractions, from seven-pence to a shilling.

The land in all this province is estimated by the *dia de buyes*, or quantity which a yoke of oxen is supposed to plough in one day: but this differs in every district. About Oviedo they reckon the *dia de buyes* at sixty varas by thirty, or eighteen hundred square varas; at Luanjo, it is sixty-four by forty-eight, or three thousand and sixty-two; and about Gijon, they call it seventy by thirty-five, or two thousand four hundred and fifty varas square; but in general the *dia de buyes* may be taken for about half an acre.

Near Luanjo the land produces, of wheat, ten for one upon the seed, and as it pays one fanega, or about ninety-two pounds of wheat for every *dia de buyes* we may reckon the rent at about sixteen shillings the acre.

After spending a few days at Luanjo, we went to *Carrio*, another country-house belonging to the count, or rather to the countess, because in Spain, the property of the husband and of the wife, are perfectly distinct. As long as she lives no one can take it from her, and when she dies, it passes to her children; or, supposing it to be entailed, it devolves immediately to her eldest son, who, at the age of twenty-one, or sooner if he marries, takes possession, even though his father should be living. If she has titles of honour, she carries them with her to her husband, and transmits them to her heir. Upon marriage, the husband makes a declaration of the effects belonging severally to himself and to his wife; and her property is so much vested in her, that, in case of her husband's bankruptcy, his creditors have no power to touch it; but if at his death it is found that he has prospered in the world, she may claim her proportion of all the savings. The latter provision is unquestionably wise, but it may be imagined, that the former must give much scope to fraud, and certainly it does; but then there are not wanting considerations to make men honest. A tradesman of Oviedo, at marriage, gave in a false specification, with a view to defraud his creditors, should he unfortunately break. The wife died soon after, and her relations claimed all the effects of which he had delivered in his declaration, as her property; and he, who had been well to pass previous to marriage, was left destitute, and could find no redress.

Carrio is a commodious habitation, neat and comfortable, but without high pretensions, situated in the midst of a fertile country, near to a little river, and not far distant from the sea. In the domestic

chapel, the count shewed me an altar, which is one solid block of marble, with the following inscription:

Imp. Cæsari Augusto Divi F.
Cos. 13. Imp. 20. Pont. M. 10.
Patr. Patriæ Trib. Pot. 32.
Sacrum.

This block was found at Cape Tauris, near the entrance into *Gijon* (Jixa of the Romans) and is mentioned, together with two others, discovered near to the same spot, by Mariana and Morales.

From Carrio we rode into *Gijon*, a considerable port, to which the English resort for filberts and chesnuts. It contains about eight hundred families. This harbour, made and maintained at a vast expense, is not reckoned safe; but there is no other in the vicinity, which can stand in competition with it.

We were entertained with great hospitality by *Don Francisco Paular Jove Llanos*, a captain in the marine, who is retired from service. An old officer in every country is a pleasant companion, and in no country more so than in Spain. In this gentleman I found all that a foreigner can wish for, good sense, politeness, and great information.

The next morning, we returned by Carrio to Luanjo; and in the way, stopped in a beautiful meadow near *Candace*, to partake of a little fête champêtre.

At *Peran*, in this vicinity, in the limestone rock, I met with a rich variety of *extraneous fossils*, of corals, corallines, and coralloides, with cockles, exposed by the fretting of the waves; and, upon examination, I traced this stratum running up into the country much above the level of the sea.

During my residence at Luanjo, the count shewed me a royal ordinance, dated 22d October 1785, stating, That the principal cause of the decay in agriculture, was the unlimited power of the landlord to eject his tenants at the expiration of their leases; and appointing, that, from henceforth, in the Asturias, the farmer, provided he cultivated well, and was not considerably behind hand with his payments, should neither be ejected at the expiration of his term, nor have the rent raised; reserving both to the landlord and the tenant, an appeal to skilful persons, who should regulate the value of the farm, and give a compensation to the occupier, on his quitting it, for any improvements made either by himself or by his ancestors. This provision, most undoubtedly, is both wise and just; because it not only stimulates the industry of the farmer, but encourages his parsimony, by shewing him where he can immediately make all his gains productive, and thereby promotes the highest improvement of the soil. But, as for wisdom or justice in the former provision, I must freely confess, I can discover neither. Every thing is worth what it will fetch; and if men, who wish to find employment for their capitals are willing to advance the rent, why should not the landlord avail himself of this? In most countries, the ruling powers are too busy, and will be meddling, when things would naturally, and without their interference, much better regulate themselves.

September 11, I returned to Aviles, and the count went to spend a few days at another country-house, whither he pressed me much to bear him company; but I had neither health nor spirits for this excursion.

The resemblance between the Asturias and many parts of England, is very striking. The same is the aspect of the country, as to verdure, inclosures, live hedges, hedge-rows, and woods; the same mixture of woodlands, arable and rich pasture; the same kind of trees, and crops, and fruit, and cattle.

Both suffer by humidity in winter, yet, from the same source, find an ample recompense in summer; and both enjoy a temperate climate, yet, with this difference, that as to humidity and heat, the scale preponderates on the side of the Asturias. In sheltered spots, and not far distant from the sea, they have olives, vines, and oranges.

The cyder of this country is not so good as our's; but I am not able to determine, whether the fault is wholly in the making, or whether there is not likewise some natural imperfection in the fruit. Certain it is, that they pay little attention to this article, neither suffering the apples to hang the proper time upon the trees, nor selecting the best kinds, nor leaving them to sweat, nor picking out bad fruit, nor racking off the cyder when it is fine. The opposite of all this, both as to the liquor and the fruit, is the practice of our best cyder counties. Not contented with racking once, we draw it off three or four times, if needful, always observing to do this when the cyder is become fine. For this purpose, they who are most curious, will even sit up with it, when the time draws nigh, that they may seize the proper

moment. If the Asturians paid attention to this, their cyder would become a considerable article of export, and, together with their nuts, and other fruits, would bring great wealth into the country.—Yet, with the best information, and the most minute attention, it is by no means certain, that they would ever be able to produce a liquor equal in strength to that of our best counties, because of the prevailing humidity; on account of which, every thing this principality produces is inferior in its quality to the productions of a warmer climate. The herbs here dry away to nothing; and the wood burnt upon the hearth, makes little or no ashes, yet produces so much soot, that the chimneys are perpetually choked. Such is the humidity of this province, that the misletoe grows not only on the oak, but on apples, pears, and thorns.

All the way from Aviles to Oviedo, we found the harvest over, and the people, men, women, and children, in the field, threshing out the grain with flails; because, in this moist and temperate province, they cannot use the trillo.

Their flail is very heavy, and extravagantly long, not less than five feet in common, and the handstaff is nearly of the same length. In consequence of this, the motion of the flail is slow, and the exertions of the thresher turn to little account. To understand this subject, we must recollect the laws of motion. Now, when quick motion is communicated to the grain, whilst the straw remains unmoved, or when the straw receives the stroke, whilst the grain continues in a state of rest, a separation is the consequence. When either moves slowly, the other follows, and no separation is effected; but the greater

the velocity of either, the more certain and speedy is the separation of the grain. Supposing the straw and grain to be moved with different velocities, the same effect will follow in proportion to that difference. We must always remember, that the weight of impinging bodies being given, the magnitude of the stroke is directly as the velocity. This principle rightly understood and applied, would not only long since have banished heavy flails for threshing the lighter grains, but would, from the beginning, have led to the machine for coining, now recently introduced at Birmingham.

Threshing is by no people better understood than by the Wiltshire peasants, who, for wheat, prefer a flail of three feet, weighing about twenty-four ounces, with a hand-staff of the same length.

In the Asturias, they depend upon the wind for winnowing, and have no idea of a machine for performing that operation in a barn. Were they to see the fan, formed after the model of a machine first invented by Reiselius of Wurtemberg, called *rotatilis suctor, et pressor*, but discovered by Dr. Papin, and from Holland introduced into this island; it is to be hoped, that, without either prejudice, or scruples, they would immediately adopt it; and that no fanatic priest, as in North Britain, would condemn the use of it as impious, under the idea of not depending upon providence for a favourable breeze.

When I returned to *Oviedo*, a gentleman gave me a collection of amber and of jet, of which there is great abundance in this province; but the two most considerable mines of it are in the territory of Beloncia, one in the valley called *Las Guerrias*, the other on the

side of a high mountain in the village of Arenas, in the parish of *Val de Soto.* The former is found in slate, and looks like wood; but when broken, the nodules discover a white crust, inclosing yellow amber, bright and transparent. Jet, and a species of kennel coal, abounding with marcasites, universally accompany the amber. The natural history of this curious substance is so little understood, that every fact relating to it should be treasured up. Till of late years, it was found only on the sea-shore, cast up by the waves; but even then, the various insects inclosed in it, such as ants and flies, proved it to be a production of the land. But now we find it fossil, and hence trace a connection between bitumens and resins. We see it likewise as one link in a vast chain, the origin of which all philosophers are labouring to discover. We find it in a country, where the inclosing strata, and all the surrounding rocks, charged with marine shells and plants, shew clearly, that both it and they are the deposit of the ocean.—This subject will be frequently resumed, and, from its vast importance, merits the most minute attention.

When every one began to talk of winter, I thought it expedient to prepare for my return towards the south, before the mountains should be covered by the snow, which usually falls at the beginning of November, and sometimes even in the middle of October. And this departure the good bishop himself was anxious to hasten. I was not indeed in a condition to undertake the journey; but the fear of being shut up in the Asturias, till the return of spring, prevailed over all other considerations, and made me resolve to venture.

As the account of my indisposition may serve towards the natural history of the country, I shall briefly give it. The 21st of August, riding from Oviedo to Aviles, on a rainy day, I was wet through; and at the end of our journey, as I had nothing at hand to change, I suffered my clothes to dry upon my back. I had, however, no reason to think that I had taken cold, till I perceived that I was gradually losing the use of all my limbs, without either pain or fever. The physician, at the end of one month, confined me to my bed, and forbade me the use of wine, allowing me only water and vegetables, till he had reduced me to the lowest state of debility. I submitted; but, feeling evidently that I was going fast from bad to worse, I took my leave of him, and, by the use of bark, with a generous diet, I regained some degree of strength, and, getting myself by the assistance of four men placed upon a mule, I ventured to set forwards on my way towards the south.

The bishop and his family expressed their concern at my departure; yet, considering the humidity of their climate, and the near approach of winter, they were kind enough to consent that I should undertake the journey, in hope that a warmer and a drier air might restore my health.

What a sight do we here behold, a catholic bishop entertaining a protestant clergyman, or a teacher of heresy, and as if he were a brother parting from him with regret, then following him with extreme anxiety, till he should hear of his safe arrival under the hospitable roof of the Marquis of Oviaco, near Salamanca.

JOURNEY

FROM THE

ASTURIAS TO THE ESCURIAL.

OCTOBER 2, I left Oviedo. When I had proceeded two miles from Oviedo, and perceived that I was disposed to faint away, I felt myself obliged to have recourse to the Peruvian bark and wine, with which I had been furnished by my valuable friend the bishop.

Passing through several little villages, I came to *Mieres* in the middle of the day. At night I found a comfortable bed at *Campomanes*, having travelled ten leagues and a half over delightful hills, all either covered thick with wood, or highly cultivated.

In both these places I was much surprised at the moderation of their charges. At Mieres, for a dish of eggs, for dressing my fowl,

and for the *ruido de la casa*, that is, for the noise of the house, or rather for attendance, the good woman required only a real, or something more than two-pence farthing. At Campomanes, for the same and for my bed, the demand was two reals.

As we approached the confines of the principality, the scene greatly changed; for, instead of soft and swelling hills, covered with grass or clothed with woods; scarcely any thing was to be seen but stupendous rocks of limestone, some in long ridges rising perpendicular to the height of two or three hundred feet, others cragged and broken into a thousand forms. In this route, the way winds chiefly by the side of little rivers, brooks, or torrents, till it has passed the summit of that vast chain of mountains, which separates the Asturias from the Old Castille; yet in the midst of these stupendous mountains, a few rich valleys intervene, each with its little village, in size proportioned to the extent of land susceptible of cultivation.

In the ravines through which we passed, I observed that all the mills have horizontal water-wheels. These grind the corn very slowly, being fed by single grains; but then to compensate for this defect, they place many near together, and the same little stream, having communicated motion to one wheel, passes in succession to the rest. These are well suited to a country abounding with stone for building, where water runs with rapidity down a steep descent, and where despatch is not required,

October 4, as we descended towards Leon, we overtook a Merino flock, belonging to the monastery ot Guadalupe, in Estramadura. These monks have sufficient land near home to keep their flock

ring the winter months; but in the summer, when their own mountains are scorched, they send their sheep into the north, where, having no lands, they are obliged to pay for pasturage. They were on their return towards the south.

The great lords, and the religious houses, to whom belong these *trashumantes* or travelling flocks have peculiar privileges secured to them by a special code, called laws of the Mesta; privileges, by many considered as inconsistent with the general good.

This institution has been traced back to the year 1350, when the plague, which ravaged Europe for several years, had desolated Spain, leaving only one-third of its former inhabitants to cultivate the soil. But perhaps we ought to look for its origin in more remote and distant ages, when the whole country was occupied by shepherd nations, and when agriculture was but little known. These certainly were the first inhabitants, or if not the first, at least, as the votaries of Pan, that venerable protector of the fleecy tribe, they may claim precedency before the more modern worshippers of Ceres. Occupying the hills with their numerons flocks and herds, it was natural for them in winter to quit a country then covered deep with snow, and to seek the more temperate regions of the south; till these, burnt up by the returning sun, refused them pasture, and drove them back again to the mountains of the north, which, during the summer months, are covered with perpetual verdure by the gradual melting of the snow.

The numbers of the Merino sheep are continually varying. Cajaleruela, who wrote A. D. 1627, complained that they were reduced

from seven millions to two millions and a half. Ustariz reckoned in his time four millions; but now they are near five. The proprietors are numerous, some having only three or four thousand, while others have ten times that number. The Duke of Infantado has forty thousand. Each proprietor has a mayoral or chief shepherd, to whom he allows annually one hundred doubloons, or £75, and a horse; and for every flock of two or three hundred sheep, a separate shepherd, who is paid according to his merit, from eight shillings a month to thirty, besides two pounds of bread a day for himself, and as much for his dog, with the privilege of keeping a few goats on his own account.

The produce of wool is reckoned to be about five pounds from every ewe, and eight from the wethers; and to shear eight of the former, or five of the latter, is reckoned a good day's work. Some indeed allow twelve sheep to every shearer; but this comes short of what we do in England, where a common hand will dispatch sixty in a day, and a good workman, has been known to finish, half as many more.

The wool of the Merino sheep is worth little less than twelve pence a pound, whilst that of the stationary flocks sells for only sixpence; and every sheep is reckoned to yield a clear profit of ten-pence to the proprietor, after all expenses are discharged.

When the sheep are travelling, they may feed freely on all the wastes and commons; but, in passing through a cultivated country they must be confined within their proper limits, in a way, which is ninety varas wide. Hence it comes to pass, that, in such inhospi-

table districts, they are made to travel at the rate of six or seven leagues a day; but where pasture is to be had, they are suffered to move very slow. When they are to remove, either in the spring or autumn, if the lord has no lands, where his flocks are to be stationed, the chief shepherd goes before, and engages agistment, either of those proprietors who have more than sufficient for themselves, or of the corporations, who, in Spain, have usually extensive wastes and commons round their cities.

It is to these claims of the Merino flock, that some political writers have attributed the want of cultivation in the interior provinces of Spain.

On descending once more into the plain of Old Castille, an observation, confirmed by all with whom I had any communication on the subject, occurred to me, that the wine on the south side of the mountains, being transported to the north, improves greatly in its flavour, precisely as other wines improve by being removed to warmer climates.

At the end of three days, when I arrived at Leon, I was so well satisfied with the attention of my guide, that we made a fresh agreement, and he accompanied me to Salamanca. For himself, and for his mule, I was to allow him a hard dollar, or about four shillings a day, both in going and returning, he being to pay all his own expenses on the road, which for a stranger, is the best plan, although the natives find it more advantageous to maintain their guides.

Having settled all preliminaries, and made provision for the journey; on the 6th of October we turned our backs on Leon; and, being by this

time tolerably acquainted with each other's dialect, we began a conversation by the way. The honest fellow, taking a hearty swig at the *borracho*, or leathern bottle, which contained our wine, broke the silence, by telling me, that this was the skin of his most favourite cat; and then, continuing his discourse, gave me the history both of the cat, and of the countries through which he had travelled with her spoil.— This was to him, in all his journeys, a constant companion, a never-failing source of consolation; and he appeared to be as fond of her now dead, as it was possible for him to have been, whilst she was sensible of his caresses. The skin contained about a gallon, and usually served us, when filled, for more than half a day.

The way was over an extensive plain of sand and gravel, evidently brought from distant hills, all smooth, and rounded by the action of water. The crops are chiefly rye, with some wheat and barley. The trees are the ilex, the poplar, and the elm.

I was struck with the construction of their ploughs, not merely as having neither sheet, coulter, mould-board, fin (for to this defect I was become familiar) but as having the share mortised into the curved beam at least three inches above its heel, creating thereby a degree of friction, which must greatly increase the labour of the oxen. Women hold the plough. The cart-wheels are of plank, fixed upon the axis, like those in the Asturias, only they are better made.

The numerous villages contain from fifty to five or six hundred mud-wall cottages, but seem in general to be going to decay. The inns are more wretched than those of the Asturias, and are thought to be considerable, if they make up more than one bed.

At *Toral*, where we slept the first night from Leon, as soon as we arrived, I surveyed the premises, and made out my inventory of the furniture; finding in the chamber (for they had only one) two beds, two broken benches, one crippled table, and a little lamp dripping its oil, and smoking in the middle of the room. This circumstance is not uncommon, because they have no candles, and their lamps are of the most rude construction. I was, however, too much of a traveller to feel disgust, and was preparing to settle myself confortably, when an old canon of Oviedo, with two school-boys, and a young friar, entering, told me, that they had bespoken this room some days before. I bowed submission, but stopped one moment to inquire the age of this young friar. He informed me, that he was now in his seventeenth year; and that, two years before, at Aviles, in the Asturias, having accomplished his noviciate, he had bound himself by the irrevocable vows.

When I had retired, my faithful guide informed me, that he had procured a bed for me at the house of the curate, who was a friend of his, whither he instantly conducted me. Here I met with such a reception, that I had no reason to lament my disappointment at the posada.

The next morning we arrived at Benavente, and in the way had occasion to observe a change of dress. In this respect, every province has something peculiar to itself. The peasants who attracted my attention, were from Astorga. They had round hats, leather jackets without sleeves, and trowsers somewhat resembling those of Dutch-

men, perfectly corresponding with what were formerly worn by the *Brachati.*

Benavente is at present remarkable only for the palace of the duchess, a vast and shapeless pile, possessing the marks of great antiquity, and commanding a most extensive property. This city seems to be going to decay, yet includes six convents. It is divided into nine parishes, and reckons two thousand two hundred and thirty-four souls.

Bread is here three quarts, or $\frac{17}{32}$ penny a pound of sixteen ounces; beef is seven quarts, or a small fraction under two-pence; and mutton is two-pence farthing a pound. The best wine is about five-pence a gallon. These are the stated prices, when beef and mutton are to be had; but my guide having neglected to make provision for himself, must have been contented to pick the bones of my miserable fowl, had it not been for the bounty of a traveller, who had more than he could eat.

The road from Leon to Zamora is about eighteen Spanish leagues, all the way near the Esla, a little river whose water runs into the Duero below Zamora. From this circumstance the way is mostly level; the soil, to a great depth, is either *granite sand*, or clay of a weak contexture; and the villages are composed of mud-wall cottages.

At *Santa Ovena*, having the curiosity to measure the room, which, like most in Spain, served the double purpose of bed-chamber and parlour, I found it to be twelve feet by ten; yet, in these contracted limits were contained, a bed, the tressels for another, a chair, a table,

with two large chests for the king's tobacco, for barley, linen, and all the treasures of the family. The kitchen is nearly of the same dimensions; yet in this posada, I counted thirty-five horses, mules, and asses, with their riders and drivers, who all found lodging for the night.

Whilst I was at supper, an old beggar entered. When I had given him bread, he kissed it, bowed his head, and left the room. Struck with his behaviour, I followed him instantly, and gave him money; he bowed, kissed it in silence, and left the inn.

Zamora, a city of great antiquity, is at present reduced very low, but formerly it must have been considerable, and will, I have no doubt, soon regain its consequence. Situated in a fertile country, on the confines of Portugal, watered by the Duero, and near the conflux of the Esla, it must always have invited plenty; and when the communication shall be opened by the canal, for the transport of its productions, it will daily grow in wealth. The extent of its fortifications, twenty-three parish churches, and sixteen convents, inclosed within the walls, in some measure serve to shew what it was; and the recent decorations of the cathedral give a good specimen of what it may hereafter be. This building is old, but the altar is modern, and is much to be admired for the variety of its marbles, chiefly from the Asturias; for the elegance of its composition; and for the beauty of its hangings, which are made of crimson velvet, richly embroidered with gold.

The chief manufactures are, of hats, serges, coarse cloth, and nitre; but for the latter, the climate is by no means favourable.

Beef is cheaper than at Benavente, being here only six quarts, or something more than three-halfpence a pound; but pork is nearly three times as much.

From Zamora we travelled only three leagues, and rested for the night at *Corrales*, a village of three hundred and sixty cottages. It was not till next morning that I fully comprehended for what reason we had made so short a journey the preceding day; but, upon our entering an extensive forest, my provident conductor told me, that he always chose to meet the morning, rather than to be overtaken by the night, whenever he was to pass through a forest, and that, by such precautions, he had frequently escaped unmolested, where others had been robbed.

From Corrales we ascended gently for three leagues, and then descending as many, at the end of seven hours we reached *Calzada de Valdeunciel*, having travelled for at least five hours through a forest, in which, as we proceeded, my guide told me the names of the eminences to be passed, all distinguished by one generic term *Confessionarios;* implying, that on these the traveller would stand in need of a confessor to prepare him for his fate. Considering the vast extent of this forest, and its vicinity to Portugal, no situation can be more favourable to robbers, or to the smuggler, who, when he has been plundered himself, is apt to plunder others.

The soil here is most evidently *decomposed granite* with its quartz, feld spat, and mica. The trees are chiefly ilex, roble, and the cork-tree.

All the way from Leon to Salamanca, for three and thirty leagues, or about one hundred and fifty miles, the country is so flat and open, that the Moorish horse, when they invaded Spain, must have met with nothing to impede their progress; because, in such extensive plains, an oppressed people, dispirited and disarmed, could have little inclination to make resistance; and had it not been for a more hardy race inhabiting the mountains of the north, the whole peninsula might at this moment have been numbered among the followers of Mahomet.

When I directed my course towards Salamanca, it was with a view of paying a visit, by appointment, to the Marquis of Ovieco, but, unfortunately for me, on my arrival, I found that he was detained by illness at Madrid. This disappointment was the more vexatious, because I had no letters, nor any prospect of being introduced. I ventured, however, to present myself to Dr. Curtis, president of the Irish college, who received me with politeness, took me under his protection, and, during my ten days abode at Salamanca, considered me as part of his family.

His situation is respectable, and the convent, part of which he occupies, is one of the best in Spain. It was built A. D. 1614, by the Jesuits, but, upon their expulsion, being found much too extensive for any one society, it was divided; the south side being given to the Irish, and the north to the bishop of the diocese for his students.

The wing, in the occupation of the former, is three stories high, and more than two hundred feet long. In the middle of each, through the whole extent, there runs a wide gallery to form a communica-

tion between a double row of bed-rooms. These long galleries having no light excepting at the ends, are well adapted to the climate: for even at noon, and during the most dissolving heats of summer, they afford a cool retreat. The whole building is covered with a terrace walk, commanding all the country; and here the young men take the air.

The wing devoted to the bishop's college is nearly similar to this, with the addition of a cloister, and an elegant apartment of sixty feet by thirty, designed for conference and disputations.

The church is in common to both establishments, and is built upon such a plan as must do credit to the taste as well as to the wealth of the disgraced community.

In the Irish college, three-score students are received at a time, and when these are sent back to Ireland, the same number from thence are admitted, to be, like them, trained up for the ministry. Their course of education requires eight years. They are expected to come well founded in the languages; and of the time allotted to them in Spain, four years are given up to the study of philosophy, the remainder to divinity. The system of philosophy includes logic, metaphysics, mathematics, physics, and ethics. For these they read Jacquier; and for theology they follow P. Collet. They rise every morning at half-past four, and have no vacations.

The mode of giving lectures is perhaps peculiar to themselves, but worthy to be followed in our universities. The students have questions proposed for their discussion twice every day, and on these they are informed what books to read; then, supposing the subject to admit

of a dispute, it is carried on by two of them, under the direction of a moderator, who gives assistance when it is wanted, and guides them to the truth. Where this mode of proceeding is not admissible, the tutors, instead of giving formal lectures, employ themselves in the examination of their pupils, and the business of instruction is thus greatly expedited.

Dr. Curtis lives with his pupils like a father with his children; and although in a state of banishment, seems happy in the discharge of his important functions. It is, however, much to be lamented, that he and they should be reduced to the necessity of seeking that protection in a foreign and distant country, to which they are entitled in their own. This kind of persecution is neither just nor politic. It is certain that ignorance and bigotry have a strong connection. Would you overcome inveterate prejudices, and are you anxious to banish superstition? let in the light. Would you conciliate the affections of those, who differ from you in their religious creed? no longer persecute. Embrace them, and from enemies they will become your friends; let in the light, and difference of opinion dies away. Catholics, in the more enlightened countries, are no longer papists; their whole system is going to decay; and without claiming more than common sagacity, we may venture to foretel, that in proportion as the limits of toleration shall be extended, all that cannot bear the light will gradually vanish, till the distinction between catholics and protestants shall cease.

To hasten this event, the education of catholics in Ireland, for the purpose of the ministry, should not only be connived at, but should meet with all possible encouragement.

The university of Salamanca was founded in the year 1200, by Alfonso IX, king of Leon, and regulated by Alfonso, surnamed the Wise, (A. D. 1254) under whose protection flourished the greatest astronomers of Europe. This seminary soon rose into importance, and became eminent in Europe by acquaintance with the Arabian authors, and, through them, with the Greek. Its professors translated Avicena, who took the lead in medicine, and Averroes, who had bestowed much time in studying Aristotle; but not satisfied with copying from the Arabs, they laboured much themselves, and became justly famous in their day for their knowledge in jurisprudence, and for their progress in all the sciences then cultivated in Europe. The feverence of the first professors of this university for Aristotle and for Thomas Aquinas, continues to the present day. The court indeed has long declared war against them both, and repeatedly commanded that they should be abandoned; but, not having adopted such methods as are practicable, to secure obedience, the old professors walk in the same path, in which their fathers walked before them.

We are not however to imagine, that Salamanca produces no men of liberal ideas. Far be it from us to entertain such a thought; because we know, that even in the darkest ages, some men of science were hid in convents, who, had they lived in more avourable times, would have diffused light, and have been admired in the world. One such, and I doubt not there may be many, I met with in D. Joseph Diaz, a father of the Augustines; who, for learning, good sense, and liberality of sentiment, would be an ornament to any country.

The students were formally reckoned about sixteen thousand, but

they are now much reduced; and in 1785, the number of matriculas was nineteen hundred and nine. In a curious edict of Charles V. for the regulation of mendicity, we find a clause permitting students in the universities to beg, provided they have a licence from the rector: but in the present day they appear to be in a more respectable condition, and few, if any, take advantage of this privilege.

The library is spacious, and tolerably well furnished with modern books; yet the bulk is trash, consisting principally of scholastic divinity.

Of all the public edifices, the cathedral is the most worthy of attention. The foundation of this ancient structure was laid A. D. 1513, but it was not finished till 1734. It is three hundred and seventy-eight feet long, one hundred and eighty-one wide in the clear, one hundred and thirty high in the nave, and eighty in the ailes. The whole is beautiful, but the most striking part of this church, and of many public buildings in this city, is the sculpture, which merits admiration, not only for the taste therein displayed, but for its excellent preservation. Over the principal door is represented, in bold relief, the adoration of the sages; and over another, the public entrance of Christ into Jerusalem; all appearing as fresh and sharp as if they were but recently exposed to the air.

The church of the Dominicans comes little short of the cathedral in point of sculpture. It has a representation of St. Stephen stoned, with a crucifix above it, all as large as life, and not apparently injured by the weather. Indeed in both these edifices the carvings are in some measure protected, not from a driving rain, but from its

perpendicular descent, because they sink back as much as the thickness of the wall will permit, which is at least six feet, and are surrounded by mouldings projecting considerably beyond the wall. The precaution, without doubt, was prudent; yet I was not a little struck when I observed the ornaments of bass-relief preserving their sharpest angles, even when exposed to the full force of the destructive elements. This circumstance may be readily accounted for, when we consider that the stone is a grit, which when first taken from the quarry, is soft; but upon being exposed to the air, acquires hardness. Hence it is peculiarly valuable both to the architect and to the sculptor; and to these properties we may attribute the beautiful monuments of art which abound in Salamanca.

It would be tedious to describe the convents and public seminaries of this once famous city; yet to pass them all in silence, would be inexcusable. I therefore briefly mention such as are most worthy of attention.

Among these may certainly be reckoned the old college. Here the quadrangle is small, yet elegant; and the cloister, with its four and twenty columns, is one of the prettiest in Salamanca; the apartments are commodious, and those of the regent are in a superior style.

The college of the archbishop is built upon a larger scale, more light and airy, and having four galleries of one hundred and thirty feet, with two and thirty columns supported by as many, which form the cloister, it may be called magnificent. The date of this building is 1550.

Cuenca college is remarkable at present for its neatness and simplicity; but the portico, when finished, will place it among the most elegant buildings of this city.

The college of Oviedo, with the churches of the *Augustinos Calzados* and of the *Carmelitas Descalzos*, deserve attention.

Of all these colleges and convents, it were endless to enumerate the treasures and rich jewels designed for the service of the altar. Whatever is most valuable, the produce of Europe, Asia, Africa, and America, is here collected; and the best workmen, in every country, have exerted all their taste and skill, each in his several branch, to shew the perfection of his art. The ornaments and dresses of the priests are both rich and beautiful; but the most costly piece of furniture, in most convents, is the Custodia, that is, the depository of the host, or, according to the ideas of a catholic, the throne of the Most High, when, upon solemn festivals, he appears to command the adoration of mankind. It is not uncommon to expend six thousand ounces of silver upon one of these, besides gold and precious stones; yet in most of them, the workmanship surpasses the value of the materials.

The great square, although last mentioned, is not least worthy of attention. I had almost hourly occasion to pass through it, and never saw it without pleasure. It is spacious, regular, built upon arches, and surrounded with piazzas. Such a square would be admired *even* in London, or in Paris; but in a city like Salamanca, where all the streets are narrow, it gives peculiar expansion to the lungs, when you find yourself at liberty to breathe, when light bursts upon you

by surprise, and when symmetry unites with greatness in all the objects by which you are encompassed.

The portico is not to be more admired for its beauty in the day, than for the protection it affords by night; because in this city they have an execrable custom, both offensive to the nostrils, and destructive of good clothes, similar to that, for which the inhabitants of the Old Town in Edinburgh have been deservedly reproached.

In the year 1030, there was not a single convent in Salamanca; and in 1480, previous to the discovery of America, they had only nine for men, and three for women; but now there are thirty-nine. In 1518, they counted eleven thousand virgins. At present all the persons under vows are happily reduced to one thousand five hundred and nineteen.

The houses are no more than three thousand, yet they have twenty-seven parish churches, with fifteen chapels, and the clergy are, of those that are parochial, three hundred and ninety-nine; of the cathedral, one hundred and thirty-two; besides the royal clergy of S. Mark, forty-nine; amounting in the whole to five hundred and eighty.

In a city where the convents and clergy are so numerous, it may be well expected, that beggars will abound; and agreeably to this idea it is seen, that by the ample provision here made for laziness, every street swarms with vagabonds, not merely with those, who are proper objects of compassion, but with wretches, who, if compelled to work, would be found abundantly able to maintain themselves. There is indeed an hospicio, or general work-house, for their reception,

but as the funds are limited, and do not amount to sixteen hundred pounds a year, it can support only four hundred and fifty paupers. Should, however, the government be inclined to increase these funds, it will make no great difference, because the numbers both in the work-house and the streets, will always bear proportion to the food distributed. This truth can scarcely be inculcated too often; but I shall defer my observations upon it, till I come to treat of Cadiz.

Among the various implements in this hospicio, I was pleased with one for weaving tape, both cheap and simple in its construction, and so expeditious in its work, that a little child weaves near fifty yards, and a woman more than one hundred and twenty in a day.

I was much pleased with the first operations of husbandry in the vicinity of this city, as being suited to the soil. The plough has neither coulter, fin, nor mould-board; but near the tail of the share it has two pins, so disposed, as to lay the furrow in high rafters or ridges, like the roof of a house. In this condition, the land is left till seed-time, when the ploughman first sows the grain, then slits the furrow; and thus the seed, being all covered at an equal depth, springs away together, and appears as if it had been drilled. This, in a light soil, is certainly much better, than either to plough clean before the grain is put into the ground, or to sow it under furrow, according to the practice of some English farmers; yet I am inclined to think that the Hampshire method of sowing upon stale fallows, and letting in the seed by drags, would be found more profitable.

It is well known, that by this modern improvement, the value of

land has been more than doubled upon all the Hampshire hills. When they were accustomed to plough often for their wheat, as in the low countries, and upon strong land, it has frequently happened, that after sowing four bushels to an acre, they have reaped only eight, and sometimes not more than half as much. But now, by suffering the land to settle, by scattering their seed upon the ground, when the whole perhaps is covered with thistles, and by passing their heavy drags twice over the field, moving each time the length-way of the furrow, they make a saving on the quantity of seed, and more than double the produce they were accustomed to receive. By improving on this practice, that is, by pushing the principle so far, as to fold his sheep upon the land as fast as he had sown it, a judicious farmer who lives at Cholterton, in Wiltshire, a few years since reaped forty bushels from an acre, on land which, with different management, would probably never have yielded back the seed he sowed.

When I express myself satisfied with the husbandry in the neighbourhood of Salamanca, it is only so far as it relates to ploughing; for in no other respect has it any claim to approbation. The ploughman and the grazier, instead of being united in the same person, are here eternally at variance; and as the latter is the best tenant, the great proprietors give him the preference. Hence the country has been depopulated, and the lands which are in tillage, for want of cattle to manure and tread them, produce light crops of corn. This bishopric formerly contained seven hundred and forty-eight corporation towns; but now it has only three hundred and thirty-three, the other four hundred and fifteen being deserted, and their arable

lands reduced to pasture. To such an extent is the depopulation spread, that, in a space of seven leagues in length, and five in breadth, which formerly contained one hundred and twenty-seven towns, each with its corregidor and council, only thirteen remain. These have forty-seven churches.

The soil, I have said, is light. It is a sand, and evidently a *decomposed granite*, because, upon examination, it is seen to be plentifully charged with a fine white mica. The rock is chiefly *granite*, covered in some places with schist, but in others with silicious grit, which, as it appears to me, is nothing but the fine sand or broken quartz of the granite, united by a cement.

All men are fond of system: they assemble facts, and are never happier than when from these they can deduce some general conclusion. The facts I wish to have recorded, are such as may trace out the origin of grit; and I am at present much inclined to think, that hereafter it will be given to the *granite*. The connection, as it relates to vicinity, stands confessed, and may be so far useful, in making out the history of that great revolution which once happened to our earth; but, from my own observations, I am ready to infer a more intimate connection, and that they stand related to each other as effect and cause, or as the parent and his offspring.

I have already suggested this idea, and have ventured to draw one conclusion from it in respect to Monjouy, near Barcelona. If well founded, this will assist us to account for the astonishing number of large grit stones, or grey whethers, as they are called, on the Wiltshire Downs, and will confirm the diluvian system first suggested

by Mr. King, in the Philosophical Transactions of 1767. One of these large bowlder stones of Wiltshire grit, contains fragments of white opaque, and likewise of transparent quartz, with two *flint-stones* of a considerable size. These refer us to different epochas and operations. I must, however, reserve what I have to say upon this subject, till I come to the description of the Alps, on my return from Spain.

The government of the city is in a corregidor, one alcalde mayor, and forty-eight regidores.

When I had satisfied my curiosity at Salamanca, and found my strength so far restored that I could with safety prosecute my journey, I made an agreement with a *Mozo del Camino*, for himself and mule, to go with me to the Escurial, not by the direct road, but by a small detour, in order to see, at Piedrahita, a famous country-seat built by the Duke of Alba. The next day, after dinner, October 22, I took leave of Dr. Curtis, with a cordial regret at parting, and set forward on my way, proceeding towards Alba.

For the first two leagues we ascended gradually; then entered a forest of ilex, which, as my guide informed me, stretches east and west near forty leagues. The acorns here are of the kind described by Horace, as the origin of war among the rude inhabitants of an infant world, "*glandem* atque cubilia propter." Not austere, like those of the oak, or the common ilex, but sweet and palatable, like the chesnut, they are food, not merely for the swine, but for the peasants, and yield considerable profit. Beyond the limits of this forest, we began to descend through a fine cultivated country, abounding with corn and wine; and at the distance of four short leagues from Salamanca, we reached *Alba*

This city contains at present only three hundred houses, and has seven convents. One of them, that of the Carmelites, merits attention for its pictures, and for its treasures; but the greatest curiosity is the castle, with its round tower, supported by four square ones, in which is deposited the armour of all the Dukes of Alba. To this ancient edifice they have added, at successive periods, more modern habitations, forming a considerable quadrangle; but unfortunatley all the rooms are small.

About three leagues from hence, we entered another vast forest of the ilex, where we saw many droves of swine, a village with a church, consisting of four cottages, including the habitation of the curate. Here we took up our quarters in the middle of the day; and having left it, were proceeding towards Piedrahita, when a fall of heavy and incessant rain compelled us to stop short of it, and to have recourse for shelter to a miserable village called *Malpartido.* The posada had only one bed for the use of the whole family; and as that was occupied by a lad, son to the good woman of the house, then dying of a putrid fever, we had a most uncomfortable prospect for the night. Besides the bed-chamber, they had, as usual, a kitchen, a room of about ten feet square, with an elevated hearth in the centre of it, over which a little opening in the roof afforded a vent for the smoke. Around the earth was a wide bench, which by day supplied the place of chairs, and by night served the purpose of a bed. Upon this they designed to scatter straw for me, leaving my guide to measure his length on the bare board at the other end of this magnificent apartment. Happily, however, I had a pass from Count

Camponanes in my pocket. This I sent, with my humble duty to the alcalde, requesting that he would be pleased to procure me a lodging for the night. In a few minutes the messenger returned, and soon after the alcalde was announced, I rose up instantly, prepared to meet him with profound respect; but, instead of a haughty magistrate, such as my imagination had conceived him, behold a little insignificant man, humble in his appearance, dressed in a coleto, or leathern jacket destitute of sleeves, and bound close round him with a girdle of the same materials. He informed me, that he had made all arrangements, and that the best bed in the village was preparing for me. He had scarcely finished, when the young man, whose place I was to occupy, entered to expostulate; but the alcalde cut him short with *no hay remedio;* and therefore, finding that it was to no purpose te complain, he quitted possession with a good grace, and took up his lodging in the house of some relation. Having thus secured a bed, I left my guide to take good care of the alcalde, as a token of gratitude for his attention, and retired to my quarters for the night.

In my new habitation I met with a comfortable bed, clean sheets, and a kind reception from the family; and when I was to quit them in the morning, they could not be prevailed upon to accept a recompense. I was much surprised at finding such generous sentiments in a cottage; but I have since had frequent opportunities of admiring the high spirit of the Spaniards, and, *in many instances,* their contempt for money.

The putrid fever was not confined to the posada; it raged without restraint, and not only in this village, but in those of the vicinity, there was scarcely a house from which they had not lately buried one of the family. It is much to be lamented, that the curates in Spain are not taught the management of fevers. As they must attend the dying, to administer the sacraments, it would be a deed of mercy well suited to their character, and by no means inconsistent with their sacred functions, should they learn to prescribe the medicines, which, in England, when properly applied, generally succeed in checking the disease, and rescuing from death. This knowledge may be easily acquired; and whenever it shall be universally diffused, fevers will cease to be so destructive as at present, and will be feared in many cases no more than fire, which, well regulated, is not only safe, but salutary; yet, if suffered to spread, is fatal to the house. It is not my intention to insinuate, that the two professions of physic and divinity should be united, but only that in every place there should be some one at hand, who might endeavour to extinguish this destructive flame the moment it appears, and, considering how small and thinly scattered are the villages in Spain, and how wretched their inhabitants, the curate is the only person from whom they may naturally expect relief.

The country beyond Malpartido is exceedingly broken; and the *granite rocks*, exposing their rugged fronts without a covering, shew clearly that the summit of this great chain of mountains is not remote. We had been ascending all the way from Salamanca; but

having left the Tormes, as we draw nigh to Piedrahita, the waters take another course, and run into the Adaja.

Piedrahita is a village of one hundred and fifty houses, with three convents and a beaterio, belonging to the Duchess of Alba, and famous only on account of a country seat erected here by the late duke, in imitation of the English. Instead of being built round a court with a corridor, like the Spanish houses, it presents a front of one hundred feet, with two projecting wings of sixty feet; and the ground-floor, instead of being abandoned to coach-house and stables, is occupied by the kitchen, the offices, and the principal apartments; and over these, are bed-chambers for servants. Contrary to the Spanish custom, every room is ceiled, and the walls are papered. Altogether, it is a comfortable residence; but to an Englishman, it has no great pretensions. Had not the fairest part of its furniture been removed, it would have seemed more beautiful; for the duchess who had been there with her friends for a few weeks during the greatest heats of summer, was lately returned to court, and her presence would have made a more humble habitation appear enchanting.

In leaving Piedrahita, we continued along the valley, shut in between high mountains, all covered with the ilex and gumcistus. These, mixed with the *grey granite* rocks, make a beautiful appearance. As we advanced, we overtook several Merino flocks returning to the south. Near the *Casas del Puerto*, we entered another valley, running east and west near ten leagues, and never much more than a mile in breadth. At the end of it stands *Avila*

The soil is sand; the plough is like that last described; the fields are divided into small portions; and the pasture is common. Their sheep are folded, and the shepherd remains all night with his dogs near his flock, sheltered only by a straw cabin, just large enough to stretch himself at length. They have no iron about their carts, either on the wheels or axle-trees; the whole is wood. The oxen are yoked in pairs, and draw heavy burdens by their horns. The dress of the peasant is the *coleto.*

As soon as we arrived at Avila, I visited the market, to make as usual, provision for the day; and having purchased a kid, which, when the Merino flocks are passing, sells for about ten reals, or two shillings, I sent it to the cook's shop, and then began my rambles. Whilst I was making some inquiries, a gentleman accosted me, gave me the informations I required, undertook himself to be my guide, and, before we parted, made me engage to dine with him. This was D. Baltasar Lezaeta, a prebendary of the cathedral; from whom I received as much attention as if I had been recommended by a friend.

Avila has at present only a thousand houses, or one-sixth part of its former population; yet the convents are not diminished, being sixteen in number, nine for men, seven for women. Besides these, it maintains eight parish churches, a cathedral with forty canons, five hospitals, and a university. No wonder then, that it should swarm, as it does, with sturdy beggars.

This city, built upon a *granite rock*, and inclosed by a wall, with eighty-eight projecting towers, has every where the appearance of great antiquity, but more especially in the cathedral.

In this are many things worthy of attention, but principally the cloister, for its exquisite neatness, and elegant simplicity. The sacristy is a good building, and the treasure contained in it, both in plate and jewels, would in England be called inestimable. The custodia, as usual, of solid silver, is four feet high, adorned with Ionic, Composite, and Corinthian columns, and displays much taste both in its design and execution. Among their jewels they have the pectoral of the late Archbishop of Toledo, the infant Don Louis, valuable chiefly for its gems, all large and of the finest water. The choir has beautiful carvings.

Of the convents, the most remarkable are those of the Carmelites; one for nuns, the other for friars; the latter built upon the spot where S. Teresa was born, the former where she took the veil. In this, the principal thing at present worthy to be noticed, is a picture by Morales, representing a dead Christ in his mother's arms; of which, nothing need be said after having named the painter, because all his works have such peculiar softness and expression, that men have universally agreed in calling him, divine. The Carmelites of Avila once possessed a treasure infinitely more valuable to them, than all the pictures ever painted by Morales: this was the body of S. Teresa. It was originally interred at Alba, A. D. 1582, but three years afterwards it was secretly taken up, and conveyed to Avila, where it was not suffered long to rest; for the Duke of Alba, finding all other expedients vain, made application to the pope, and obtained an order for its return.

The life of S. Teresa, lately published among those of other saints, by the Reverend A. Butler, is peculiarly interesting. Her frame was naturally delicate, her imagination lively and her mind, incapable

of being fixed by trivial objects, turned with avidity to those, which religion offered, the moment they were presented to her view. But, unfortunately meeting with the writings of S. Jerome, she became enamoured of the monastic life, and quitting the line, for which nature designed her, she renounced the most endearing ties, and bound herself by the irrevocable vow. Deep melancholy then seized on her, and increased to such a degree, that for many days she lay both motionless and senseless, like one who is in a trance. Her tender frame, thus shaken, prepared her for ecstacies and visions, such as it might appear invidious to repeat, were they not related by herself, and by her greatest admirers. She tells us, that in the fervour of her devotion, she not only became insensible to every thing around her, but that her body was often lifted up from the earth, although she endeavoured to resist the motion; and Bishop Yepez relates in particular, that when she was going to receive the eucharist at Avila, she was raised in a rapture higher than the grate, through which, as usual in nunneries, it was presented to her. She often heard the voice of God, when she was recovered from a trance; but sometimes the devil, by imitation, endeavoured to deceive her; but she was always able to detect the fraud. She frequently saw St. Peter and St. Paul standing on her left hand, whilst our Lord presented himself before her eyes in such a manner, that it was impossible for her to think it was the devil; yet, in obedience to the church, and by the advice of her confessor, she insulted the vision, as she had been used to do the evil spirits, by crossing herself, and making signs of scorn. Once, when she held in her hand the cross

which was at the end of her beads, our Lord took it from her, and when he restored it, she saw it composed of four large gems, incomparably more precious than diamonds. These had his five wounds engraved upon them after a most curious manner; and he told her, that she should always see that same appearance: and so she did; for, from that time she no longer saw the matter, of which the cross was made, but only these precious stones, although no one saw them but herself. Whenever devils appeared to her in hideous forms, she soon made them keep their distance, by sprinkling the ground with holy water. She had often the happiness of seeing souls freed from purgatory, and carried up to heaven; but she never saw more than three which escaped the purifying flame; and these were F. Peter of Alcantara, F. Ivagnez, and a Carmelite friar.

It is acknowledged, that many of her friends, distinguished for their good sense and piety, after examination, were of opinion, that she was deluded by the devil; yet such was the complexion of the times, that she was at last universally regarded as a saint. She had indeed every thing needful to conciliate the good opinion of her friends, and the admiration of the multitude. The gracefulness and dignity of her appearance, the softness of her manners, and the loveliness of her disposition, the quickness of her wit, the strength of her understanding, and the fire of her imagination, all her natural accomplishments receiving lustre from her exalted piety and zeal, from the sanctity of her life, and the severity of her discipline, all conspired to establish her reputation, as one that had immediate intercourse with heaven.

It is curious, yet most humiliating, to see a person of this description, amiable and respectable as S. Teresa, deceived, and with the best intentions, deceiving others. In this instance, we can readily account for the delusion from the delicacy and weakness of her frame, the strength of a disturbed imagination, and the prevalence of superstition. But when we see men of the finest understandings, in perfect health, of different and distant nations, in all ages, treading upon the same enchanted ground, we can only wonder; for who can give any rational account of the abberations of our reason? The history of mysticism, if well written, would be highly interesting, as embracing some of the finest characters that were ever admired in the world. Should any able writer be engaged to undertake this work, he will explain to us the principles upon which Bossuet, that prodigy of learning, persecuted Fenelon, the most amiable of men, whilst S. Francis of Sales was the object of his adoration; and why he poured contempt upon Madame Guion, whilst he had the highest reverence for S. Teresa.

This extraordinary woman, cherished by sovereign princes, universally admired whilst living, and worshipped when dead, had the happiness of leaving behind her, sixteen nunneries, and fourteen convents of friars, founded by herself, and subject to the order of Carmelites, which she had reformed.

Avila, although it no longer possesses her remains, yet, as the place of her nativity and chief residence, is much resorted to at the season of her festival. It has no manufactures. Some years since they began making cloth, but the situation not being favourable, the project

was abandoned, and their dependence at present is on the produce of the soil. The country abounds with saffron, and this for a season finds employment for the women and the children. Were it not for the cathedral and the convents, the city would be deserted, because not one proprietor of land resides here; the whole being either rented, or held in *administration*, as they express it; that is, cultivated by stewards on the proprietors' account.

No country can suffer more than Spain for want of a rich tenantry; and perhaps, none in this respect can rival England. We find universally that wealth produces wealth; but then, to produce it from the earth, a due proportion of it must be in the pocket of the farmer. Many gentlemen among us, either for amusement, or with a view to gain, have given attention to agriculture, and have occupied much land; they have produced luxuriant crops, and have introduced good husbandry; but, I apprehend, few can boast of having made much profit, and most are ready to confess that they have suffered loss. If then, residing on their own estates, with all their attention, they are considerable losers; how great would be the loss, if in distant provinces they employed only stewards, to plough, to sow, to sell, and to eat up all the produce of their lands? In France they are so sensible of this, that for want of wealthy farmers, the proprietor finds stock, and takes his proportion of the produce; but in Spain, excepting a few provinces, the lands are commonly in administration; and hence, extensive districts yield only a contemptible revenue to their lord.

From Avila we proceeded about a league through a rich valley, and then began to climb those mountains, which, dividing the two Castilles, formed for many ages the strong barrier between the Christians and the Moors; till Ferdinand I. descending with the united forces of Castille and Leon into the plain, drove the infidels before him, and displayed his victorious banners in Guadalajara, Alcala, and Madrid.

On these high mountains, we travelled near five leagues without seeing a human face, or habitation, and scarcely a beaten track.

At a lower level we found the ilex. As we ascended, these were succeeded by the roble oak; but near the summit we saw only pines, with the juniperus europeus, the daphne mezereum, the matricaria suavis, the genista, and a variety of aromatic herbs, but chiefly thyme. At almost every level, the cistus tribes abound upon the granite mountains, excepting where, like these, the summits are covered with an eternal snow.

The first little village we passed through, is called *Naval Peral;* the next, at the distance of a league, *Navas del Marques:* this, although it has only fifty cottages, has a church, a chapel, and a convent. From hence we proceeded about three leagues, and then began descending into the plains of New Castille.

All the way from Salamanca, I observed saffron growing wild, which, if collected, would help to employ the poor in their villages, and yield considerable profit.

As we approached the Escurial, we entered upon the king's hunting road, made like those of England, rather for use than beauty.

Had the Spaniards been every where satisfied with such; where they have finished one league, they might have completed twenty! Their ambition aims in every thing at perfection, and by seeking too much, they often obtain too little. The idea they have formed to themselves of a perfect road, in point of utility, is most undoubtedly well founded; but in attempting to reduce this to practice, they are forced to lose much time, and to expend more money than the benefit to be derived from it, is worth. Had their ambition been less aspiring, ere now a communication would have been opened between all their great cities, and much of their produce, now lost, would have found a market. This hunting road should convince the theorists among them, that a highway may be firm without side-walls, and support any given weight without such a foundation of huge rocks, as would be needful for a castle. And although, for the mere purpose of expedition, to be perfectly both straight and level would be desirable, yet the traveller is better pleased where he finds variety, and is charmed, as he proceeds, with a constant succession of new prospects.

On my arrival at my journey's end, I found a letter from our minister, Mr. Liston, to inform me, that when the court left S.t Ildefonso, where he had been for some time expecting me, he had visited Madrid, and that he should not come to the Escurial till the beginning of the week.

Having therefore some time to spare for the excursion, I immediately proceeded to repass the mountains, not returning by the same road, but going eastward by Guadarrama, and crossing by the *Puerto*

de Fuenfria, a pass so called from the coldness of its waters. This puerto is elevated, and the prospect from it is delightful; but with the scorching sun, the ascent to it is scarcely bearable. In looking down towards Segovia, the whole country appears level, like the surface of a lake, and extended like the ocean; but as we descend into this plain, we see the mountains rise before us. The country immediately around us, near this summit, is majestically wild, with deep ravines and projecting rocks, covered with pines, wherever pines can grow, and torn by raging torrents.

In a deep recess, open and exposed only to the north winds, stands S. Ildefonso, enjoying freshness, and gathering the fruits of spring, when all to the south of these high mountains, fainting with heat, are engaged in reaping, and collecting the autumnal crops. This change of climate, in the space of eight leagues, for that is the distance from the Escurial to S. Ildefonso, induced Philip V. to build a palace here.

S. Ildefonso occupies three sides of a square, the two wings of which being joined, each by a long range of buildings, designed for the king's retinue, and closed in at bottom by iron grates and rails; the whole forms a beautiful and spacious area. The principal front of five hundred and thirty feet in length, is to the south, looking to the garden, and through its whole extent the apartments communicate with all the doors on the same line.

To give some idea of the pictures, it may be sufficient to name the masters, whose works have been here collected by Philip, and by succeeding princes. The principal are Leonardo de Vinci, Michael

Angelo, Raphael, Hannibal Caracci, Guercino, Guido, Carlo Maratti, Correggio, Rubens, Poussin, Paul Veronese, Woverman, Teniers, Martin de Vos, Andrea del Sarto, Vandyke, Domibicini, Tintoret, Albert Durer, Jordano, Velasquez, Ribera, Ribalta, Valdez, Murillo, Mengs. In the church, the fresco paintings are by Bayeau, Mariano, and Maella.

In the lower apartments is a collection of antique statues, made by Christina, queen of Sweden, and considered as inestimable.

The church is dark, but elegant; and, with respect to treasures, has few to rival it in Spain. Among the vast variety of gold and silver ornaments, the most striking is one of the *custodias*, valued originally at seventy thousand ducats, or £7,690 8*s* 6*d*. sterling.

The garden occupies a ridge, rising to the south, and falling both to the east and to the west. Near the palace it is laid out in the old taste, with clipped hedges and straight walks, highly adorned and refreshed with numerous fountains; but in proportion to the distance, it becomes more wild, till it terminates in the uncultivated and pathless forest, where the cragged rocks appearing among oaks and pines, present a striking contrast with the works of art.

This garden, delightful for its walks, which, although shady, are neither damp nor gloomy, is most to be admired for its fountains. Of these, the most remarkable are eight, dedicated to the principal heathen deities, and adorned each with its proper emblems. In one Diana appears, attended by her nymphs, who are hiding her from Acteon. In another is seen Latona with Apollo and Diana surrounded by sixty-four jets of water. The most surprising is Fame seated on

Pegasus, with a trumpet to her mouth, throwing up a stream of more than two inches in diameter, to the height of one hundred and thirty-two feet. But the most pleasing sight is the *Plazuela de las Ocho Calles*, where eight walks unite, each with its fountain in the centre, and where eight other fountains, under lofty arches supported by Ionic pillars of white Italian marble, form an octagon, adorned with the images of Saturn, Minerva, Vesta, Neptune, Ceres, Mars, Hercules, and Peace, standing round it; and Apollo with Pandora, in the middle. The statues are all of lead, varnished in imitation of brass, and were made by Fermin and Tierri. Besides fountains innumerable, here are vast reservoirs and falls of water, so disposed as to contribute much to the beauty of the place.

When we consider, that the whole of the garden was a barren rock, that the soil is brought from a great distance, and that water is conveyed to every tree; when we reflect upon the quantity of lead used for the images, and of cast iron for the pipes, with the expense of workmanship for both, we shall not be surprised to hear, that this place cost forty-five millions of piastres, or, in English money, near six millions and a half.

Nothing is more whimsical than taste; but, if it be true, that beauty is founded in utility; this place will always deserve to be admired. In the present day, it is not uncommon to build the mansion in the middle of a field, open and exposed to every wind, without shelter, without a fence, and wholly unconnected with the garden. Near the habitation all is wild, and art, if any where, appears only at a distance. In all this we can trace no utility, nor will

succeeding generations discover beauty. On the contrary, in the garden of S. Ildefonso, we find every thing, which in a sultry season is desirable; a free circulation of air, a deep shade, and refreshing vapours to absorb the heat; whilst from its contiguity to the mansion, the access to it is easy, and at any time these comforts may be instantly enjoyed; yet, without these numerous fountains, the clipped hedges, and the narrow walks, the circulation would be less rapid, the shade less deep, and the refreshing vapour would be wanting.

The glass manufacture is here carried to a degree of perfection, unknown in England. The largest mirrors are made in a brass frame, one hundred and sixty-two inches long, ninety-three wide, and six deep, weighing near nine tons. These are designed wholly for the royal palaces and for presents from the king. Yet, even for such purposes, it is ill placed, and proves a devouring monster in a country where provisions are dear, fuel scarce, and carriage exceedingly expensive.

Here is also a royal manufacture of linen, employing about fifteen looms; by which, as it is said, the king is a considerable loser.

Being now within the distance of two short leagues from Segovia, I could not return, without paying a visit to that interesting city. In the way to it, there is little appearance of cultivation, and the obvious reason is the continual depredations occasioned by the royal deer. As we passed through the woods, before we came into the open field, we saw vast herds of them, unconfined, and free to range unmolested over all the country.

In Segovia, the first object to attract the eye, is the aqueduct. It contains one hundred and fifty-nine arches, extends about seven hundred and forty yards, and, where it crosses the valley, is something more than ninety-four feet high.

The cathedral has no great pretensions; yet in one of the chapels there is a good altar, with the Descent from the Cross well executed in mezzo relievo, by a disciple of Michael Angelo, and finished A. D. 1571. The church is nearly upon the model of the great church of Salamanca, but it is not so highly finished.

The Alcazar, or ancient palace of the Moors, has been so often described, that I should pass it over in silence, did not the attentions I received there deserve a particular remembrance. I had no letters, and Count Lacy, the inspector, was absent; but, upon presenting myself to his lieutenant, as a stranger, he received me with politeness, and conducted me to every apartment. This strong tower is no longer, as formerly, a state prison; it serves a more honourable purpose, and is devoted to one hundred cavaliers, who are here instructed in the military science. The sight of this building gave me pleasure, more especially the great hall, with the images of all their monarchs; but the highest satisfaction was, to see the Spanish character strongly marked in the countenances of many among the young gentlemen who are educated here. A Spaniard may possibly grow rich in trade; he may make a progress in the sciences; but were he left to follow his natural inclination, he would certainly betake himself to a military life; and for that, if courtesy, if patience and

fortitude, if a love of enterprize, are requisite, in all these the true Spaniard will excel.

Segovia was once famous for its cloth, made on the king's account; but other nations have since become rivals in this branch, and the manufacture in this city has been gradually declining. When the king gave it up to a private company, he left about three thousand pounds in trade; but now he is no longer a partner in the business. In the year 1612, were made here, twenty-five thousand five hundred pieces of cloth, which consumed forty-four thousand six hundred and twenty-five quintals of wool, employed thirty-four thousand one hundred and eighty-nine persons; but at present they make only about four thousand pieces. The principal imperfections of this cloth are, that the thread is not even, and that much grease remains in it, when it is delivered to the dyer; in consequence of which, the colour is apt to fail. Yet independently of imperfections, so many are the disadvantages under which the manufacture labours, that foreigners can afford to pay three pounds for the arroba of fine wool, for which the Spaniard gives no more than twenty shillings, and after all his charges can command the market even in the ports of Spain.

In the year 1525, the city contained five thousand families; but now they do not surpass two thousand: a scanty population this for twenty-five parishes: yet, besides the twenty-five churches, together with the cathedral, they have one and twenty convents. When the canal is finished, and the communication opened to the Bay of Biscay at S. Ander, the trade and manufactures of Segovia may

revive, but previous to that event, there can be nothing to inspire them with hope.

As we returned (October 28) towards New Castille, my intention was to have travelled at our leisure, but observing some degree of impatience in my guide to repass the mountains before night, I was happy to indulge him; and the next morning, when I looked back and saw the lofty summits covered deep with snow, I comprehended the reason of his solicitude. The ways behind us were rendered thus for the time impassable, whilst all before us had been only watered by soft and refreshing showers.

In the old Castille, the usual price demanded by a muleteer is four reals a day for himself, as many for his mule, and six for barley, altogether equal to 2*s*. 9*d*. but should you omit to make a bargain, you must depend upon his mercy. The whole expense of travelling may be reckoned at ten shillings a day, if you go straight forwards; but if you make a circle, or return with the same mule, it comes to about 7*s*. 6*d*.

The convent of S. Lorenzo is seated in a deep recess, at the foot of those high mountains, which separate the two Castilles; and protected from every wind, except the south-east, it looks down upon a wide extended plain, with all the neighbouring hills covered by thick woods, whilst the mountains to the north are bare, or covered almost perpetually with snow. It was built by Philip II. in obedience to his father Charles V. to accomplish his vow made after the battle of S. Quintin, which he gained by the intercession of S. Lorenzo.

In honour of that saint, the architect, Juan Bautista de Toledo took his idea from a gridiron, the instrument on which he suffered, making the royal residence project by way of handle, and representing, not only the bars by multiplied divisions, but the legs, by four high towers placed in the angles of this edifice. The dimensions of the convent are seven hundred and forty Spanish feet by five hundred and eighty, and the height is sixty; but the dome of the church is three hundred and thirty. The whole was finished under the inspection of Juan de Herrera, who was pupil to Bautista.

The friars of this convent are one hundred and sixty, and their annual revenue is five millions of reals, or about fifty thousand pounds, arising partly from land, and partly from their stock of thirty-six thousand Merino sheep, besides one thousand kept constantly near home, for the consumption of the family.

Their library consists of thirty thousand volumes, contained in two magnificent apartments, each, one hundred and ninety-four Spanish, or something more than one hundred and eighty-two English feet in length. In the lower room, are chiefly printed books; yet in it is deposited the famous manuscript of the Four Gospels, written in gold letters, a work of the eleventh century. Over these are collected four thousand three hundred manuscripts, of which five hundred and sixty-seven are Greek, sixty-seven Hebrew, and one thousand eight hundred Arabic, the latter well described in a catalogue lately published by Casiri.

In the middle of the lower room is a temple, with a great variety of figures, containing one thousand four hundred and forty-eight ounces of silver, and forty-three of gold, beside rich gems.

To a connoisseur in paintings, no place can afford higher entertainment than the convent of the Escurial. In every part of it are seen the works of the best masters, and some of their most capital performances. It were endless to enumerate particulars. Suffice it to say, that during the residence of a month, I never failed a single day visiting the convent, and never left it without regret; always giving a more minute attention to the productions of those artists, who are the least known in England. I had peculiar pleasure in finding here, so many monuments of Titian, who, during a residence of five years in Spain, constantly exercised his pencil to enrich this nation, and to immortalize his name. The pictures, which most rivetted my attention, were the famous Supper of Christ with the Disciples, by Titian; and a Holy Family, by Raphael; the latter once in the possession of our Charles, but sold by Cromwell, and purchased by the Spanish ambassador, for two thousand pounds; it is called *La Perla*. The best of the pictures are collected in five principal apartments: in the sacristy, a room of one hundred and eight by thirty-three; in the *iglesia vieja*, which is one hundred and five by thirty-four; and in two halls of eighty by twenty, with their antichamber. These last are called Las Salas de los Capitulos, and, whilst the court is here, are occupied by Count Florida Blanca, on his public days. The great stair-case is beautiful, adorned with fresco paintings of the battle of St. Quintin, by Luca Jordano.

The pantheon, or catacomb, where the royal family, beginning with Charles V. are buried, is a subterranean vault of beautiful marble, highly finished, capable of receiving twenty-six bodies, each in its own recess.

As for the treasures of the church, they are inestimable. The image of S. Lorenzo alone, contains four hundred and fifty pounds of silver, with eighteen pounds of gold; yet this bears a small proportion to the rest.

At a little distance from the convent, the Prince of Asturias, and one of his brothers, the infant Don Gabriel, have each a little box, fitted up with exquisite taste, and hung with the best pictures, to which they often retire with their friends. That of the prince is the most elegant, and, as far as can be warranted by one specimen, forms a happy presage for the arts, whenever he shall mount the throne.

The Escurial, as a residence, is far from pleasant. Were it low, and sheltered, like Aranjuez, it would be agreeable in spring; or, were it elevated, hanging to the north, and covered by thick woods, like S. Ildefonso, it might be delightful as a retreat in summer; but exposed as it is, to the full stroke of a meridian sun, and raised up near to regions covered with eternal snow, without shelter, and destitute of shade, it has no local charms at any season of the year. The ministers, foreign and domestic, give good dinners, and do every thing they can to make this solitude supportable; but, as few ladies can be accommodated here, the assemblies want that gaiety which is peculiar to the sex.

The king spends most of his time in shooting. In the middle of the day, after a short excursion, he returns to dinner, converses with the foreign ministers, retires for a few minutes with his confessor, and generally before three, sometimes much sooner, leaves the palace, and goes to the distance of twenty or thirty miles before he begins to

hunt. When the light fails, he gets into his carriage, and returns. No weather deters him, because he is not afraid of either thunder, lightning, hail, rain, or snow, but when one cloak is wet, he puts on another; and as for his attendants, he tells them coolly "Rain breaks no bones." No holidays detain him from his sport, except two in the passion-week; and then, although he is naturally of a most placid temper, he is said to be so cross, that no one chooses to come near him. Even when one of his sons was thought to be at the point of death, he went out as usual, always insisting that he would certainly recover; and when informed that his son was dead, he replied, with his accustomed calmness, "Well then, since nothing can be done, we must make the best of it." His usual attendants are the Prince of Asturias, the captain of the guard, his master of the horse, his groom of the stole, his physician, and his surgeon. All these occupy five carriages; besides which, there is one for medicines, guns, ammunition, dry clothes, &c. Each carriage has six mules; and as, upon the road, there are several relays for them and for the guards, the number required for daily use is about two hundred. Their rate of travelling is twelve miles an hour; in consequence of which, accidents happen frequently to the men, and to the mules.

In hunting, the king does not depend altogether on his dogs: he has commonly about two hundred men employed to beat up the game, and drive it towards him at convenient places, where he and the prince are ready, with servants attending to charge the guns, and to hand them forwards as fast as they are fired. No game comes amiss to him; but he is peculiarly flattered with the idea of delivering the

country from wolves, of which he keeps an exact account; and, when I was at the Escurial, the number he had shot was eight hundred and eighteen. Whenever one is heard of within a reasonable distance, a multitude of people, from sixteen hundred to two thousand, according to the extent of the mountain, are sent out to watch, surround, and drive it into some spot, where the king may have the best chance for killing it. To these he gives six reals each; but if he kills the wolf, the watchmen have double pay. This expense, it must be confessed, is needless; because a few peasants would often be sufficient, either to destroy the enemy, or make him quit the country; but where a good sovereign has pleasure in a pursuit, his subjects will be the last to think, that he can purchase it too dearly. It were happy, however, for Spain, were this the whole expense; but it certainly bears a small proportion to the sum total of what the nation loses by the king's rage for hunting. All round the *sitios*, or royal mansions, the wastes are of vast extent. I am informed, that the forest of the Pardo, is thirty leagues in circumference; and if to this be added, all the uncultivated land near Aranjuez, S. Ildefonso, and the Escurial; if, moreover, we consider that the deer, being unconfined, range freely over the intermediate country, how high will be the estimate! It is true, the king pays the farmers to the utmost for the damages they suffer; but then, the injury sustained by the community cannot be so easily compensated, because the country, wanting food, is depopulated, and the villages are gone to ruin.

I have been told by those, who are best acquainted with the king, that in his youth he had acquired a taste for letters, but being checked in that pursuit, he had given scope to the family propensity, a propensity not only now confirmed by inveterate habits, but encouraged in himself with a view to avoid entanglements. He is certainly a man of principle, and is universally allowed to be one of the most virtuous men in his dominions; but this purity of morals he himself attributes to his mind being constantly amused, and not to his natural constitution.

I prolonged my stay at the Escurial, chiefly for the purpose of being present at the *Batida*, or royal hunt, of which there are four every year. This was ordered for the 28th of November, previous to the departure of the court.

On the day appointed, Mr. Liston had the goodness to place me with the Neapolitan ambassador, who, as representing one of the family, gave a sumptuous repast upon the occasion; and in his carriage I proceeded to the scene of action. It was an extensive plain, with a rising ground commanding it, and at the distance of about half a mile from this eminence, rose a little wood, in which the king with his three sons, were hid, attended by their servants. For many days previous to this, two thousand men had been dispersed in parties over the whole country to disturb the game, and to drive it towards the common centre, by patroling night and day, and constantly, yet slowly, drawing nearer to each other. Soon after we had occupied our station on a rising ground, we began to see the deer at a vast distance bounding over the plain from every quarter, and

making towards the fatal spot. As they approached, we heard, faintly at first, then more distinctly, the sound of guns, and saw the confusion of the game, moving quick in all directions, but changing their course at every instant, as if uncertain where to look for safety. When the scouring parties came first in sight, they appeared to be separated by intervals, and to confine the game merely by their shouts and by the firing of their arms; but as they advanced upon the plain, they formed a wall, and as they drew nearer, they strengthened this by the doubling of their ranks, compelling thus the game to pass in vast droves before the royal marksmen. Then began the carnage; and for more than a quarter of an hour the firing was incessant. Some of the deer, who had either more discernment than the rest, or a better memory; who were actuated by stronger fears, or, perhaps, by more exalted courage, absolutely refused to proceed when they approached the ambuscade; and making a quick turn, notwithstanding the shouts, the motions, and the firing of the guards, they leaped clean over their redoubled ranks, and escaped into the woods.

When the firing ceased, the carriages all advanced towards the wood, and the company alighted to pay their compliments, and to view the game. We found part of it spread in two rows upon the field of battle, and the king, with his sons surveying it. The gamekeepers were returning loaded with such as had been mortally wounded, but had yet escaped to a considerable distance; and as fast as they arrived, they deposited the spoil at the sovereign's feet. Having the curiosity to count the numbers, I found one hundred

and forty-five deer, with one wild boar, Whilst thus engaged, I heard a murmur, and saw every one in motion. Directing my attention to the spot to which all were pressing, I saw at a distance, a little company coming with a boar tied neck and heels together, and slung upon a pole. As they approached, the monarch and his sons, arming themselves afresh, drew up in a line, and standing at a convenient distance, the burthen was deposited; the cords, one after another, were cut; and the poor crippled animal was assaying to move, when a well directed volley freed him from his fears.

The expense of that day's sport, was reckoned at three hundred thousand reals, or, in sterling, three thousand pounds.

In the evening, the game, as usual, was all deposited in the room where the king took his supper, and there the family ambassadors attended to pay their compliments. By family ambassadors are understood those of Naples, Portugal, and France, who having more free access, and being expected to pay more minute attention, think it incumbent upon them to express their interest in every thing, which gives him pleasure, and not only congratulate him upon these great occasions, but every night, whilst he is at supper, make inquiries, and afterwards inform their friends, what the king has killed.

Mr. Liston, desirous of quitting the Escurial, previous to the departure of the court, ordered a *Coche de Colleras* to be ready the day after the Batida. This precaution is taken by the foreign ministers to secure mules, because, when the court is in motion, no less than twenty thousand being required for their use, the whole country is

laid under an arrest, and neither horse nor mule can be obtained for any other purpose.

In this little journey I was exceedingly diverted and surprised with the docility of the mules, and the agility of their drivers. I had travelled all the way from Barcelona to Madrid in a *Coche de Colleras*, with seven mules, and both at that time, and on subsequent occasions, had been struck with the quickness of understanding in the mule, and of motion in the driver; but till this expedition, I had no idea to what extent it might be carried. The two coachmen sit upon the box, and, of the six mules, none but the two nearest have reins to guide them; the four leaders being perfectly at liberty, and governed only by the voice. Thus harnessed, they go upon the gallop the whole way, and when they come to any short turning, whether to the right or to the left, they instantly obey the word, and move all together, bending to it like a spring. As all must undergo tuition, and require frequently some correction; should any one refuse the collar, or not keep up exactly with the rest, whether it be for example, Coronela or Capitana; the name pronounced with a degree of vehemence, rapidly in the three first syllables and slowly in the last, being sufficient to awaken attention, and to secure obedience, the ears are raised, and the mule instantly exerts her strength. But, should there be any failure in obedience, one of the men springs furious from the box, quickly overtakes the offending mule, and thrashes her without mercy; then, in the twinkling of an eye, leaps upon the box again, and calmly finishes the tale he had been telling his companion. In this journey I thought I had learnt the names of all the

mules, yet one, which frequently occurred, created some confusion, because I could not find, to which individual it belonged, nor could I distinctly make out the name itself. It sounded like *Cagliostra*, and led me to imagine, that the animal was so named after the famous impostor Cagliostro, only suiting the termination to the sex, because the mules in harness are usually females. In a subsequent journey the whole difficulty vanished, and my high estimation of the mule, in point of sagacity, was confirmed. The word in question, when distinctly spoken, was *aquella otra*; that is *you other also;* and then supposing Coronela and Capitana to be pairs, if the coachman had been calling to the former by name, *aquella otra* became applicable to the latter, and was equally efficacious as the smartest stroke of a long whip; but if he had been chiding Capitana, in that case, *aquella otra* acted as a stimulus to Coronela, and produced in her the most prompt obedience.

We did not leave the Escurial till four in the afternoon, and at half after seven arrived at the Duke of Berwick's, where we had been engaged to spend the evening, having travelled seven leagues in about three hours and a half.

MADRID.

BEING thus returned to the capital of Spain, where I spent the subsequent winter, it may not be improper to give some idea of the life a stranger leads here, with a few observations on the manners of the age.

Having been once introduced at court, you are at liberty to go as often as you please. I availed myself frequently of this privilege, both for the sake of viewing the paintings at my leisure, and for conversation, because at court is the general rendezvous, where men of distinction assemble every morning, to pay their compliments to the several branches of the royal family, whilst they are at dinner, and to talk of what is passing in the world.

When the king gets into his coach, to go out, as usual, to his favourite amusement, the company retires; and, as the corps diplomatique is here remarkable for hospitality, a person well recommended is never at a loss for the most genteel society at all hours of the day.

Gratitude requires that I should express my obligations, in this place, to those, not only of the foreign ministers, but others, who honoured me with their friendship and protection. I shall therefore take the liberty of describing briefly the kind of life I led whilst I was near the court. In the first place noticing the venerable monarch.

The benevolence which reigns in the breast of this amiable sovereign shines in his countenance, and cannot be more clearly exhibited than by shewing the terms of amity, in which he lives with his old domestics. The degree of familiarity to which he admits them, and the liberties, which they sometimes presume to take in consequence, of this indulgence are most remarkable. *Genaro*, who had been his valet-de-chambre in Naples, constantly attends the king when he goes a hunting, following him wherever he goes. The familiarity of this old servant upon some occasions, was such that frequently the king leaned upon his shoulder, whilst at other times he leaned upon the king's. In this situation, they conversed familiarly as if they had been brothers, talking over the adventures of their youth; which always gave pleasure to the king. In the midst of one conversation, *Genaro* laid his hand upon the king's head, and said, "You lousy-headed cub," at which the king laughed heartily

What a trait was this, to evince the benevolent disposition of this amiable monarch. He loves his people, and is beloved by them.

Among the ministers, Count Florida Blanca must certainly claim the first place in my remembrance; for although at Madrid he gave no entertainments, yet in the sitios he had always the goodness to admit me into the number of his guests, when he gave his weekly

dinners. From our own minister I every where experienced, not merely that general protection, which he gives to all, and those minute attentions, for which he is universally admired, but the kindness, hospitality, and friendship of a brother. His house was at all times open to me, and when he gave a dinner to his friends, I never was forgotten.

My invitation to the Duke de la Vauguion's was both general and special. Here the dinners were magnificent, the company numerous, and the conversation interesting; and here I dined more frequently than at any other table in Madrid, attracted, however, neither by the magnificence of the entertainment, nor by the company which resorted to the house, so much as by the ease and elegance of the duke and duchess, and the lovely simplicity of their children.

With the American, Russian, and Prussian ministers, I felt perfectly at home; and not much less so with those of Genoa and Venice. The other foreign ministers often honoured me with invitations, and I was always happy in accepting them.

Whenever I wished to cultivate the sciences, or to converse with men of letters, I frequented the more humble, but not less hospitable, tables of some native Spaniards, where I never failed to meet with a kind reception. With Izquierdo and Angulo, I increased my knowledge in mineralogy; and on whatever subject I was desirous of gaining information, I was sure to meet with satisfaction, either from them or from their friends. Ortega has been already mentioned as a botanist; D. F. Bayer will always be remembered as a polite

scholar; and D. Juan Bautista Munoz will be celebrated as an historian, whenever he shall favour the public with his work on the conquest of America. Don Joseph Clavijo deserves the highest commendation, as a faithful and elegant translator, and as a man of general information. Besides these, I met with two brothers Fernandez, who have distinguished themselves in chemistry, and the Abbé Guevara, who excels in his knowledge of Spanish history, and political œconomy. With all these gentlemen I was upon a most friendly footing.

I dined frequently with the Marquis Imperiali, a grandee of Spain, most deservedly admired for the goodness of his heart, and the softness of his manners; and once I had the honour to dine with the Marquis de Ovieco, who is likewise a grandee.

This gentleman is pointed out as an example of an old Spaniard; and, if from one individual we might venture to form a general idea of a community, the politeness, probity, and true dignity, conspicuous in his whole deportment, must fill us with the highest reverence and esteem for the Spanish nation.

Like the French, the Spaniards drink their wine at dinner; but as soon as they have finished their dessert, and taken coffee, they retire to their couch.

When they rise from the siesta, they get into their carriages to parade up and down the Prado, never going faster than a walk. As they move slowly on in one direction, they look into the coaches, which are returning in the other, and bow to their acquaintance every time they pass. On some high days I have counted four

hundred coaches, and, on such occasions, it requires more than two hours to proceed one mile.

At the close of day, people say the usual prayer; then wish each other a good evening, and begin retiring to their houses, where they take their refresco of chocolate, with biscuits and a glass of water.

When you are properly introduced into a Spanish family, you are told at parting, "Now, Sir, you are master of this house;" but the extent of the grant must be judged of by your own natural sagacity; because, such is the politeness of a Spaniard, that he makes use of this expression, when nothing more is meant than that you are at liberty to call upon him; accordingly you see many retire before each meal, or drop in after it; but when it is taken in its full extent, the grant means dinner, refresco, supper, any or all, whenever it may suit you to partake of them.

Most families, especially the great, have their tertulla, or evening society for cards and conversation, after which, they, who are upon a footing of intimacy, stay and partake of a little supper. At these evening meetings you see the same faces from day to day. The society I chiefly frequented was at the Duchess of Berwick's; but I went often to the Duchess de la Vauguion's, sometimes to the Countess del Carpio's, and too seldom I visited Count Campomanes. Now and then, with a view to get an insight into the nature of society, I wandered away to other families, but not meeting any one, with whom I had been previously acquainted, besides the lady of the family, I was soon weary, and could seldom prevail upon myself to prolong my stay.

Without any disparagement to the rest, I may venture to say, that the society at the Duchess of Berwick's was the most pleasing. It was frequented by the foreign ministers, and not only were the duchess and her sister, the Princess of Stolberg, most engaging in their manners, but the ease and freedom, which every one enjoyed, made the time pass delightfully. The duchess herself, and three of her friends, occupied a whist table, some separated themselves for conversation, and the princess commonly, for a part of the evening, amused herself with drawing, under the inspection and tuition of the Prussian minister, who, for taste and execution, is one of the first masters in that line. Others were engaged at the piano-forte. For my part, I commonly took my pencil, and profited by the lessons given to the princess. At eleven o'clock we sat down to an elegant supper, and about one in the morning I retired, having nearly two miles to walk. The duke generally came home to supper, but he seldom sat long before he retired to his bed.

At the Duchess de la Vauguion's, the society was chiefly French. The amusements were cards, tricktrac, and chess, concluding with a supper.

At the Countess del Carpio's all were Spaniards, excepting one Italian, and the amusement was some game at cards. The evening closed with a light supper. The count was commonly at home before ten, and, except when at the play-house, he spent his evenings in his family. He is a sensible man, and well informed; and the countess must give life to every society where she is found. She is far from handsome; yet, from the sprightliness of her wit, and

the softness of her manners, she is highly interesting, and the more so from her delicacy of constitution, and the weakness of her health.

Count Campomanes gives no suppers, and cards are seldom seen; but his conversation fills up the time, and renders all other species of amusement needless. The society is chiefly from the Asturias, where he was born.

Beside these quiet tertullas, all through the winter the Duchesses of Berwick and Vauguion gave balls once a week, and the Countesses of Cogulludo and Penafiel gave concerts and balls, attended with splendid sideboards of ices, cakes, and jellies. After the ball, every one retired to supper with his own society.

When you pay a visit to a lady (for wherever there is a lady in the family, the visit is to her) you neither knock at the door, nor ask any questions of the porter, but go straight forwards to the room where she usually receives her company, and there you seldom fail to find her, morning, noon, and night; in winter, sitting near the brasier, surrounded by her friends, unless when she is gone out to mass. The friends are mostly gentlemen, because ladies seldom visit in a familiar way; and, of the gentlemen thus assembled, one is commonly the *Cortejo;* I say commonly, because it is not universally the case. During the whole of my residence in Spain, I never heard of jealousy in a husband, nor could I ever learn, for certain, that such a thing existed; yet, in the conduct of many ladies, whether it proceeds from the remains of delicacy, from a sense of propriety, or from fear, you

may evidently see caution, circumspection, and reserve, when their husbands are in sight. Some have address enough to keep the cortejo in concealment; and this, in Spain, is attended with no great difficulty, because, when the ladies go to mass, they are so disguised, as not to be easily distinguished. Their dress upon that occasion is peculiar to the country. They all put on the *basquina*, or black silk petticoat, and the *mantilla*, which serves the double purpose of cloak and veil, so as completely, if required, to hide the face. Thus disguised, they are at perfect liberty to go where they please. But should they be attended by a servant, he is to be gained, and therefore he becomes little or no restraint. Besides this, every part of the house is so accessible by day, and the husband is so completely nobody at home, so seldom visible, or, if visible, so perfectly a stranger to those, who visit in his family, that the lover may easily escape unnoticed. This, however, will not always satisfy the Spanish ladies, who, being quick of sensibility, and remarkable for strong attachment, are miserable, when their cortejo is out of sight. He must be present every moment in the day, whether in private or public, in health or sickness, and must be every where invited to attend them. There have been recent examples of women, even of high fashion, who have shut themselves up for months, during the absence of their cortejos; and this, not merely from disgust, but to avoid giving them offence. If the lady is at home, he is at her side; when she walks out, she leans upon his arm; when she takes her seat at an assembly, an empty chair is always left for him; and if she joins in the country dances, it is commonly with him. As every lady dances two

minuets at a ball, the first is with her cortejo, the second with a stranger; with the former, if she has any vivacity, she makes it visible, and if she can move with grace, it then appears; but with the latter she evidently shews, not indifference, but disgust; and seems to look upon her partner with disdain.

As soon as any lady marries, she is teased by numerous competitors for this distinguished favour, till she is fixed in her choice; when the unsuccessful candidates either retire, or submit to become, in future, what may be called cortejos of the brasier, without any pretensions, beyond that of sitting round the embers to warm themselves in winter.

It is reckoned disgraceful to be fickle; yet innumerable instances are seen of ladies who often change their lovers. In this, there is a natural progress; for it cannot be imagined, that women of superior understandings, early in life distinguished for delicacy of sentiment, for prudence, and for the elevation of their minds, should hastily arrive at the extreme where passion triumphs, and where all regard to decency is lost. As for others, they soon finish the career. It is, however, humiliating to see some, who appear to have been designed by nature to command the reverence of mankind, at last degraded, and sunk so low in the opinion of the world, as to be never mentioned but with contempt. These have changed so often, and have been so unfaithful to every engagement, that, universally despised, they end with having no cortejo.

I have observed, that jealousy is seldom, if ever, to be discovered in a husband; but this cannot be said in favour of the new connec-

tion, because both parties are tormented by suspicion. This it must be confessed, is natural; for as both are conscious that there is no other bond between them, but the precarious tie of mutual affection, each must tremble at the approach of any one, who might interrupt their union. Hence they are constantly engaged in watching each other's looks, and for want of confidence, renounce, in a great measure, the charms of social intercourse. Even in public, they seem to think themselves alone, abstracted and absorbed, attentive only to each other. He must not take notice of any other lady; and if any gentleman would converse with her, in a few minutes she appears confused and filled with fear, that she may have given offence. In all probability she has; and should she be the first duchess in the kingdom, and he only a non-commissioned officer in the army, she may be treated with personal indignity; and we have heard of one who was dragged by the hair about the room. But if, instead of giving, she should happen to have taken the offence, even the more delicate will fly like a tigress at his eyes, and beat him in the face till he is black and blue. It sometimes happens, that a lady becomes weary of her first choice, her fancy has fixed upon some new object, and she wishes to change; but the former, whose vanity is flattered by the connection, is not willing to dissolve it. In lower life, this moment gives occasion to many of those assassinations, which abound in Spain; but, in the higher classes, among whom the dagger is proscribed, the first possessor, if a man of spirit, maintains possession, and the lady dares not discard him, lest an equal combat should prove

fatal to the man of her affections. In this contest, the husband is out of sight, and tells for nothing.

In a catholic country, with such depravity of morals, it may be naturally inquired, what becomes of conscience, and where is discipline? It is well known, that all are under obligation to confess, at least once a year, before they receive the eucharist. Every one is at liberty to choose his confessor and priest; but before he leaves the altar, he takes a certificate that he has been there, and this he delivers to the curate of his own parish, under pain of excommunication, should he fail to do so. When, therefore, a married woman appears, year after year, before her confessor, to acknowledge that she has been, and still continues to be, living in adultery, how can he grant her absolution, or be moderate in the penance he enjoins. Without penance, and unless the priest is satisfied that there is contrition, with full purpose of amendment, there can be no absolution; without absolution, no participation of the eucharist; and, in the neglect of this, excommunication follows. Yet, from the universal prevalence of this offence, we may be certain, that there must be some way of evading the rigour of the law. Nothing is more easy. As for the penance, it is imposed by those who can have compassion on the frailties of mankind, and is therefore scarcely worthy to be mentioned. In many instances, it is ridiculous. Were any confessor severe, he would have few at his confessional. The absolution is commonly a more serious business; because the penitent must not only testify contrition, but must give some token of amendment, by abstaining, at least for a season, from the commission

of the crime, which is the subject-matter of confession. The first absolution may be easily obtained; but when the offender comes, year after year, with the same confession, if he will obtain absolution, he must change his confessor; and this practice is not only disgraceful, but sometimes ineffectual. Here, then, it is needful to adopt some new expedient. Two naturally present themselves; for, either some priest, destitute of principle, may be found, who, for certain considerations, will furnish billets; or else, which is a prevailing practice at Madrid, the common prostitutes, confessing and receiving the holy sacrament in many churches, and collecting a multitude of billets, either sell, or give them to their friends. I have certificates before me. As these carry neither name nor signature, they are easily transferred. They are simply thus: *Comulgo en la Iglesia parroquïal de San Martin de Madrid. Ano de mil fetecientos ochenta y seis.* What execrable profanation! How unworthy of our imitation. The principal cortejos in the great cities are the canons of the cathedrals; but where the military reside, they take their choice, and leave the refuse for the church. In the country villages, the monks bear rule; at least within their limits, and even in the cities, they set up their pretensions. As for the parochial clergy, one thing is certain, that many of them have families, and all are involved in the common censure. Even in the Asturias, my friend, the good bishop auxiliary of Oviedo, a man of high principle, yet of great humanity, severe only to himself, but compassionate to others, made it a rule, that none of his curates should have children in their families. This sacrifice, at least, he insisted they should make to decency. Beyond

this he did not think it right to be too rigid in his inquiries. In short, during my residence in Spain, I never found one person inclined to vindicate the curates from the common charge; but, at the same time, all, with united voices, bore testimony to the superior virtue of the bishops. Indeed, these venerable men, from all that I could hear, and from what I saw in the near approach, to which they graciously admitted me, for purity, for piety, for zeal, can never be sufficiently admired; but too few of the clergy, either secular or regular, till they begin to look towards the mitre, seem to think it necessary, that they should imitate these bright examples, or aspire after such high perfection.

This universal depravity of morals, if I am not much mistaken, may be traced up to the celibacy of the clergy. It is true, the example of the court, since the accession of the present monarch, has given prevalence to practices which were before restrained, and made that honourable, which had been attended with disgrace; but the effect must always, in a measure, have been coeval with its cause. Nay, should we be inclined to blame, in the first instance, the Italians, who are said to have brought this practice into Spain, we should be obliged at last to trace it up to this mistaken principle, that *conjugal affection is inconsistent with the due discharge of the ministerial functions.* In conversing freely with the clergy on this subject, I never met any one, besides the archbishop of Toledo, who attempted to vindicate this principle; and wherever I was, I had no difficulty in declaring war against it, because they do not consider it as an article of faith. The principle is absurd; yet upon it is founded the

celibacy of the clergy, and from that, in my opinion, is derived the corruption of their morals. It has been common for protestants, who travel in a catholic country, to inveigh against the clergy, and to laugh at the people, as priest-ridden; such abuse is exceedingly illiberal. The priests themselves are to be pitied; but the law which binds them, the cruel law which requires, that they should offer violence to nature, or, more properly, the power which can abrogate that law, should bear the blame.

The purpose of the law is however frustrated; for nature is like a rapid river, which, checked in its progress, scorns restraint, and when diverted from its proper course, either overflows the country, or forms new channels for itself. What then is gained? The parochial clergy, and these are the only clergy who should be suffered in a state, have their connections and their children, but not as they ought, in the most honourable way. They are disgraced in the eyes of the people, who are taught by their example to live in the violation of the laws; and their children, for want of a proper education are fitted only for the vilest employments in the community. How different is the picture, where marriage is allowed. The minister is like the father of his parish, and his wife performs the office of a mother; both set an example of virtue, and in every village teach the peasants how to value their domestic comfort. In the street, their children, commonly a numerous offspring, are distinguished by their look of health, by their cleanliness, and by the decency of their conduct; and, when sent out into the world, they form the most valuable members of society.

Should the Spanish government resolve to set the clergy free; more ample provision must be made for their maintenance, because at present it is scarcely sufficient for their own support; and this might be easily accomplished out of the vast revenues of the bishops, or by the suppression of some useless convents.

The play-houses in Madrid are not much frequented; the genius of the people does not assimilate with this sort of amusement. This will evidently appear by the receipts at the two theatres; for, taking the average between them in December, they each produce fifty pounds a night, but some nights less than twenty pounds; and, even in the Christmas week, not more than seventy-six. They have lately introduced the opera, but with little prospect of success; because most of the genteel people keep to their own societies, except when they attend the balls.

Few people here discover any love for the sciences. The cabinet of natural history is open to all the world, but it is not frequented and although D. Antonio Fern. Solano, the royal professor of experimental philosophy, in point of clearness, elegance, and precision, may be reckoned among the first in Europe, and delivers his lectures gratis, yet nobody attends him. Books are little read; all who are not engaged in business, are occupied in their attendance on the ladies, with whom nothing of this kind is heard of

In consequence of proper introductions, I had an opportunity of seeing most of the principal mansions in Madrid. The first, without exception, in point of magnificence, is the Duke of Alba's. The

principal front is to the south, and is two hundred feet in length, with eighty-five windows. The eastern and western fronts will be six hundred feet when finished; yet in this vast pile, there is not one room suitable to the rank and fortune of its lord. The upper stories will be occupied by four hundred bed-chambers, which are scarcely sufficient for the family, considering, that all the superannuated servants, with their wives and children, are to be lodged and pensioned there. The duke informed me, that he paid one hundred thousand reals, that is, one thousand pounds a month, in wages only at Madrid.

For commodiousness and elegance, no house in Madrid is equal to the Duke of Berwick's. Built on a declivity, with the principal front towards the west, it occupies, like other Spanish houses, the four sides of a square, yet is perfectly modern, both in style and furniture. You enter a spacious hall, then, ascending a wide staircase, you find a suit of magnificent apartments, communicating all round, and, upon the same level with the garden to the south and to the east. From this circumstance, all the ground-floor is kept exceedingly cool for a summer's residence, and the principal apartments are warm and comfortable in winter. Such an habitation would be ill suited for the accommodation of numerous domestics, with their widows and their children, descending by tradition from his ancestors; and therefore the duke, very wisely, is satisfied with giving them small pensions, and leaves them to provide a lodging for themselves.

He was so obliging, as to let me see his accomptant's offices, in which he has introduced a system of economy little known in Spain. They consist, as usual, of four departments, but then, in these he has only one accomptant-general, with three clerks; one principal secretary, with three under him; one treasurer, and one keeper of archives, with an assistant. On all his estates he has similar establishments, but upon a smaller scale. His whole property produces, gross, one million, eight hundred and eighty-eight thousand, six hundred and eighty-three reals, and from this deducting three hundred and forty-one thousand, nine hundred and eight, for the charge of management, it nets one million, five hundred and forty-six thousand, seven hundred and seventy-five reals, or £15,467 sterling.

The late Duke of Arcos had more than three hundred people in his establishment at Madrid. The Marquis of Penafiel, who is married to the young Duchess of Benevente, and is at once Duke of Ossuna, of Arcos, of Vejar, of Candia, &c. with an income of about fifty thousand pounds sterling, employed, when I was at Madrid, twenty-nine accomptants, including his two secretaries, and I understand he has since increased their number; besides these, he has an advocate, and a family physician, for whom, with his principal secretary and his treasurer, he keeps four carriages.

The Duke of Medina Cœli has thirty accomptants in Madrid, besides vast establishments on his estates, more especially in Catalonia, most of which belongs to him, and in the province of Andalusia, where he has extensive property. His son, the Marquis de Cogolludo, who has a separate establishment, informed me, that he himself paid,

only at Madrid, thirty thousand reals a month, or near four thousand pounds a year in stipends to his servants.

It is difficult to estimate, what with good management, would be the revenue of these great lords. Such a property as the Duke of Alba's, producing under administration eighty thousand pounds a year; what would it not yield, if let out to substantial farmers? If, whilst they plough, and sow, and reap, and thrash, and sell, and eat, and drink, upon the duke's account, he receives such an income; what would it be if every inch of land were made productive, and if that produce were expended with economy? With such vast possessions, well managed, he might live in splendor little inferior to the greatest sovereigns of Europe. But, instead of this, devoured by their servants, they are most of them in debt; and, under the feeling of poverty, live exceedingly retired, scarcely venturing at any time to give a dinner to their friends.

In many of their houses you find good pictures, collected by their ancestors; but, as for the present generation, they seem to have little taste for the polite arts: their time and attention appear to be lost in trifles. Among the houses where the works of the best masters are to be seen, the principal are those of Alba, Medina Cœli, Santiago, Infantado, and Santestevan. In the former is a very numerous and inestimable collection; and, among them, the portrait of the present duke, by Mengs; and the great Duke of Alba, by Titian; a Venus, by Velasquez; a Holy Family, by Raphael; and the famous School of Love, by Correggio. In this beautiful picture, Venus and Mercury are teaching Cupid to read: it was sold in London, with

other valuable pictures of Charles I. All these pictures were, when I saw them, crowded in the old mansion of the family, and therefore appeared to disadvantage; but, whenever they are cleaned and properly disposed, this will be evidently a most capital collection. All the other collections are in the highest preservation, except those of the late Duke of Santestevan, now the property of his son-in-law, the Marquis of Cogolludo, which, although inestimable, as being the works of the most ancient artists, are wholly neglected, and suffered to decay. The marquis was so polite as to attend me and the Prussian minister to see them, and witnessed our lamentations over them.

During my winter's residence at Madrid, I endeavoured to get some insight into the revenue, and, I trust, it will be found that my labour was not in vain: yet, after all my inquiries, I am inclined to think, that till some great financier, like Mr. Necker, shall arise in Spain, the confusion which reigns at present will continue to prevail in this department of the state.

Whilst the taxes were collected by farmers-general, it was easy to know the rent they paid; but now that all is in administration, to come exactly at the produce and expenditure will be attended with some difficulty. Were the whole peninsula on the same footing, were all punctual in their payments, and were the disbursements from one common treasury, this research would be expedited; but, as not one of these circumstances exists, we must take the materials as we find them, and do the best we can. I shall endeavour to give some idea both of the revenue and its expenditure, founded on authentic

documents, procured from the foreign ministers, and compared with an official paper, with which I was favoured from the treasury. But first, it will be necessary to point out the various articles which yield revenue, and to explain the terms relating to finance, briefly premising such an historical relation as can be collected from Spanish writers on this subject.

The principal resources of the crown for supporting its dignity, were anciently found in the demesnes of the sovereign; but when, during a minority, or a disputed succession, these had been plundered by the great nobility, he was obliged to solicit grants from the national assemblies. Thus it was with Alonzo II. who, after he had compelled some of his barons to restore the lands taken from himself and from his immediate predecessor during their infancy, finding these unequal to his wants, in the year 1342, he obtained from the cortes, then assembled at Burgos, an *alcavala*, or tax upon all property transferred, to defray his expenses at the siege of Algeciras. Many cities had given him a fifth on the value of all commodities disposed of by sale or barter, but when granted by the states, the tax was fixed at ten per cent. and made universal over Castille. Whilst Peter, surnamed, but perhaps improperly, the Cruel, driven from his kingdom, was a fugitive in France, Henry, his natural brother, having been proclaimed king (A. D. 1361.) the cortes granted the alcavala, without any limitation with respect to time, as a mark of their strong attachment to the sovereign of their choice. But neither was this grant, nor the aid of France, sufficient to establish the usurper on the throne; for Peter, powerfully supported by Edward,

Prince of Wales, at the head of thirty thousand men, gave him battle, and compelled him to retire. When Peter had thus regained his sceptre, and began to meditate revenge against the pope, Urban V. who had excommunicated him; his holiness readily found means to appease the indignation of the offended monarch, by granting him the royal thirds, or two-ninths of all the tythes collected in Castille, under pretence of a croisade. Peter took the money, and increased his army, but not with the least intention of strengthening himself against the infidels. He had more formidable enemies at home, and to them he bent his whole attention; but in vain, for the Prince of Wales having retired in disgust, his father, Edward III. was not inclined to continue his support. When, therefore, Henry appeared in the field once more, attended by most of the principal nobility, Peter fell. This was in the year 1369.

At the commencement of the succeeding century, Henry III. being obliged to assume the reigns of government, when he was aged fourteen, in order to prevent a civil war; on his accession to the throne found his treasury exhausted, and whilst his great barons were rioting over the spoils, which they had seized during his minority, he himself was reduced to the last extremity of want. It is related of him, that returning one day from hunting, and asking for something to eat, his steward told him plainly, that he had neither money nor credit to procure a joint of meat; "Then" said he, "take my cloak, and pawn it." He was not, however, satisfied with venting his indignation in empty words; but roused by hunger, he obliged

his nobles to restore the castles, and to renounce the pensions, which the regent had been compelled to grant them.

A. D. 1500, when the wealth of America began to flow into Spain, the internal revenue of the country ceased to be an object of attention, and the ministers of finance looked chiefly to the mines of Peru and Mexico for their supplies. But before one century had elapsed, the phantom vanished; the treasury, exhausted by incessant wars, had contracted a load of debt, such as the country was unable to support; and to pay the expenses of the invincible armada, new taxes were invented, under the denomination of *Millones*, so called because the grant was for eight *millions* of ducats. (£878,906 5*s*.) To this the cortes, some years after, added twenty-four millions, to be collected in six years; of which, four and a half was imposed on salt, the other nineteen and a half on wine, oil, vinegar and butcher's meat.

The country was not in a condition to be taxed. Rich in mines, but poor in money; exhausted by continued wars in Italy, in Flanders, and by emigrations to America; wanting, at the same time, every encouragement to industry at home; wretchedness so universally prevailed, that Dr. Moncada, in the year 1660, and Osorio, in 1686, reckoned more than three millions in Spain, who wore no shirts, because they could not afford to purchase linen. Money was at that period lent commonly for twenty, and even thirty, per cent.; and if remitted to Italy or Flanders, the discount was from fourteen to fifty per cent. being the difference of value between *vellon* and copper, in which the taxes were received, and gold or silver, in which re-

mittances were made; and this heavy discount was independent of the exchange, which, as may be readily conceived, was very high. (Camp. E. P. Apend. 4. p. 274.) Such was the state of the finance in the reign of Philip IV. His successor, Charles II. who died at the end of the seventeenth century, was once reduced to such distress, that, as appears, by a letter to be seen in his own hand-writing, he solicited money from the council of Castille to pay the expenses of his removal with his court to Aranjuez, where he was going for his health. The council answered, that, if upon examination, there was no other way to restore his health, they would grant the money.

We may readily imagine, that the receipts at the treasury were inconsiderable, when we cast our eye upon their accounts, and so late as 1714, see them wholly kept in maravedis, of which four are nearly equal to a farthing.

At the beginning of the present century, Philip V. succeeding to the crown of Spain, found only a revenue of ten million livres, or £416,666, and no money in the treasury; but, in the superior abilities of the president Orry, he had inexhaustible resources. This great man, who accompanied the young prince from France, and became his minister, raised the revenue nearly to two millions sterling; and at the end of an expensive war, left the treasury not only free from debt, but with considerable sums in bank. In the year 1714 he retired.

Previous to this period, the taxes were farmed, and the people were grievously oppressed, not merely by the farmers general and

by their judges, but by others who rented under them. The poor peasants were robbed and plundered with impunity, their cottages were sold, and they were left to perish, or, when unable to satisfy these harpies, they took refuge in a convent, their neighbours were obliged to make up the deficiency. To remedy these abuses, the new monarch thought it expedient to reunite many of the lesser farms; and, to prevent the vexation of his subjects, he recommended moderation to the farmers. His recommendation remained without effect. The farmers continued to nominate and to pay the judges, the judges continued to oppress the people, and the people continued to utter their complaints. When, however, the new minister who succeeded Orry reflected that whilst the taxes continued to be farmed, the people must be subject to oppression, at his entrance into office, in the year 1714, he put the whole revenue in administration; but, at the end of two years, he reluctantly consented to renew the farms.

After this short respite, when the galling yoke was laid upon their necks again, and the farmers were once more armed with power to oppress them, the people became impatient, and their clamours reached the throne; yet to little purpose for a season, because the necessities of the state were pleaded, and whilst Philip lived, the evil complained of was only palliated, but not removed.

A. D. 1746, on the accession of Ferdinand VI. D. Martin de Loynaz undertook to plead with him the cause of a much-oppressed people, as D. Michael de Zavala had done with his father Philip, but with more effect; for his minister, the Marquis de la Ensenada, wholly abolished the farms; and from that period they have never

been restored. In consequence of this new regulation, the magistrates of all the cities and districts in the twenty-two provinces of Castille, administer the provincial rents, and remit the produce to Madrid, receiving six per cent. for their trouble in collecting.

To reduce the subject of taxation to a system, we might divide and subdivide, till our attention should be lost in classes, orders, genera, species, and varieties, but as this, in the present case, would not in the least contribute to clearness and precision, I choose rather to adopt an alphabetical arrangement.

Annats, called *Medias Annatas* is a tax of half a year's revenue from the grandees and titular nobility on coming to their estates, or succeeding to any office. The Marquis de Squilace was fond of this resource, and, since his time, near one thousand titles have been granted. From the clergy, the sovereigns of Spain received no annats, excepting only in America and in the conquered provinces, till the *concordat*, A. D. 1753, between Lambertini and Ferdinand VI; but since that time they are no longer sent to Rome. With these, are included the *ecclesiastical months*, being one-twelfth of all benefices under three hundred ducats, or £33 nearly, and this rated according to the ancient valuation. Since these grants, the pope, A. D. 1783, gave in reversion to the king one-third of all simple benefices, which are worth more than two hundred ducats per annum, to take place as fast as vacancies occur. For the remainder of the public revenue arising from the church, see also *excusado* and *effects of the camara*, with *subsidy*, from all which may be collected the increasing, and almost inexhaustible resources of the crown.

Aposento, or *Casa de Aposento*. When Philip V. succeeded to the throne, his intention was to have made Seville the seat of his dominion; but the citizens of Madrid prevailed upon him to change this resolution, by offering him a sum of money, on condition that he should continue with them. This was afterwards changed for a rent-charge of one third on all the houses, with liberty of redemption at twenty-five years purchase.

Brandy is one of the royal monopolies. The king takes one-eighth of all the spirits as a tax, the rest he claims a right to purchase, paying for brandy twenty-two reals the arroba of twenty-eight pounds, and for spirit of wine, twenty-eight reals; the former he sells at sixty-four reals, the latter at one hundred. At this rate Madrid consumes ninety thousand arrobas, or about five thousand hogsheads of brandy, besides eighteen thousand arrobas of spirit of wine. The cities agree upon a composition for these duties.

Cards are another of the royal monopolies.

Catalonia and *Arragon*. Under this article is comprehended the *catastro* of Catalonia, with the equivalent for Arragon, Valencia, and Majorca.

Crusades. The bull of the crusades grants the same indulgences, as were usually dispensed by the popes to those, who went to make a conquest of the Holy Land, extending these, in the first instance to those, who should personally make war upon the infidels; in the second, to those who should send a deputy; and in the last place, to such as should aid by liberal contributions, the soldiers engaged in this holy war.

The indulgences are,

1st. To eat flesh on fast-days, with the consent of their physician and confessor, and, even without their consent, to take eggs and milk.

2nd. That for every day they fast voluntarily, and pray for union among christian princes, with victory against the infidels, they shall be excused fifteen years and fifteen forty hours of penance imposed upon, or in any manner due from them; and moreover, shall partake of all the prayers, alms, pilgrimages, even to Jerusalem, which shall be performed by the church-militant, or by any of its members.

3d. That visiting five altars, or five times one altar, and praying as above, they shall obtain plenary indulgences for themselves, or for any of their departed friends, in whose favour they shall perform this.

4th. That once in life, and once at the time of their decease, they may obtain from their confessor remission, even of those sins, reserved for the pope, excepting heresy, and of other sins, as often as they confess.

5th. That dying suddenly without confession, they shall obtain the same plenary indulgence as if they died under contrition.

6th. That, visiting five altars, and praying as above, on the days specified in the calendar, of which there are eleven, they may, by their prayers, for each day, deliver a soul from purgatory.

7th. That paying for two copies of the bull, a person may twice in one year enjoy all the indulgences, favours, and privileges mentioned above, and gain double the benefit he might claim on having purchased one.

For this bull, the nobles pay about six shillings and four-pence, the commons about two shillings and two-pence, Arragon, but something less in the kingdom of Castille. Even the servants purchase these; and such is the demand, that they are reckoned to produce more than £200,000 per annum. No confessor will grant absolution to any one, who has not this bull.

The effects of the camera arise from vacant benefices. By the concordat, A. D. 1753, the kings of Spain enjoy not only the nomination to ecclesiastical preferments, which formerly was in the popes, but they take the benefit of vacancies, and seize the spoils of the prelates, that is, their moveables, together with the effects of all clergymen dying intestate. These are called *espolios y vacantes*. The pope, indeed, names to fifty-two benefices, but then he must appoint Spaniards, who must not pay *cedulas bancarius*, or stipulated sums, to the apostolic see, nor high interest in lieu of a stipulated sum. Count Campomanes states the espolios y vacantes, at six millions of reals *per annum*. V. Industria Popular. p. 35.

Excusado. In every parish, the king chooses the best farm, whether for olives, corn, or vines, of which he takes the tythes, both in Castille and Arragon. The clergy formerly agreed with him for this. Afterwards it was farmed by the *gremios*, or five united companies of Madrid, at twelve millions of reals; but in the year 1778, the clergy had the grant at one-third less. Most of them accepted the offer; but they, who thought themselves too poor to venture, refused, and these farms are let to the gremios at four millions. The gremios have been accused of having availed themselves of this bargain, to purchase

corn in all the country villages, when it is cheap, to lodge it in their granaries, and then, selling it out again at a high price, to starve the people, and enrich themselves.

Extraordinary effects arise from seizures; from licenses to export goods in the register ships; and from the duty on the exportation of money. The amount is stated only at thirty-five millions; but sometimes it has been an hundred. This properly should go to the aduana, or custom-house.

Fines of the camera are levied by the council of Castille, on magistrates transgressing.

The *Indian revenue* will be considered by itself. It amounts in America, to near four millions and a half sterling; but although variously stated in the subsequent schedule as productive of revenue, it is doubted, whether it yields a profit, or becomes a loss to Spain.

Lances. This tax is paid in lieu of military service, and is, for dukes, counts, and marquisses, two hundred ducats, or about £22 for each title; but a grandee pays eight thousand reals. It is styled, *Pecuniaris compensatio pro hastatis militibus.*

Lead is a royal monopoly, and must be most uncertain in its produce.

Manufactures of cloth and glass are stated as yielding a revenue. The glass is made at S. Ildefonso, and is chiefly for mirrors, because the glass for common use is imported into Spain. It is to be feared that neither the glass, nor yet the cloth, yield any profit to the nation. It is impossible they should.

The *masterships* of the three orders of Calatrava, of Alcantara, and of S. Iago, were granted by the pope to Ferdinand and Isabella, and settled in perpetuity on the sovereigns of Spain by Adrian, to express his gratitude to Charles for having raised him to the papacy. As grand master of these military orders, the king of Spain has the disposal of nearly two hundred military fiefs, amounting in the whole to the yearly value of fifteen millions of reals, which may be considered as part of the national revenue, although not carried to account. If these were properly improved and cultivated, they would be worth, as I am well informed, more than ten-times as much.

The *notaries*, each pay two hundred ducats on his admission.

The *pasture* of the masterships arises from extensive meadows belonging to the three great orders; and the pasture of the *serena* is from a tract of country in Estremadura, formerly considerable, but from the frequent grants made by the crown to the great nobility, now so far reduced as to yield only about five and twenty hundred pounds of our money; whereas, so late as the year 1722, Uztariz states the value at more than two millions and a half of reals, or about twenty-six thousand pounds *per annum*.

Posts and Couriers. These were formerly the private property of the Counts d'Onate, grandees of Spain, but they now form one of the most valuable branches of revenue to the state. Mr. Wall established a regular post to America; but, before his time, the Spanish ambassador to the English court was instructed to procure, at London, information of all that was passing in Spanish America, and to transmit that information to his court.

The Propios and Arbitrios. Cities formerly levied taxes on waste lands granted to private people, and on provisions, for the expense of their municipal government; but the king now takes two *per cent.* on the produce, for general use.

General Rents are the duties levied in the sea-ports.

The Provincial Rents are, 1st, the *Alcavalas* of ten *per cent.* on every thing sold or bartered, whether used in husbandry or manufactures, to be paid every time the property is transferred; together with four *per cent.* laid on, at subsequent periods, to the original tax. 2nd, *Millones*, granted by the cortes, A. D. 1601, for six years, but ever since collected, being eight maravedis, or about a halfpenny a pound for butcher's meat and suet sold in the market; and eight reals for every carcase, whether brought to market, or killed for the use of private families. Under this grant, wine, vinegar, and oil, pay one-eighth on the price, estimating wine at sixty-four maravedis the arroba, vinegar, thirty-two, and oil at fifty. 3rd, *Fiel Medidor*, which is another duty on wine, vinegar, and oil, of four maravedis the arroba, granted, A. D. 1642. 4th, *The royal thirds*, or three-ninths of the tithes, first granted to the Spanish monarchs, A. D. 1274. 5th, *The ordinary and extraordinary service*, granted A. D. 1580; a tax on every thing belonging to those, who are not noble, that is, *hidalgos*, or knights.

Ecclesiastics being free from the alcavala, the millones, and all municipal taxes, called *arbitrios*; they are refunded every year according to their consumption.

All these provincial rents, in the year 1778, produced one hundred and thirty millions of reals; yet, so late as the year 1745, they were farmed at ninety millions.

Rents of Madrid, called also *Efectos y sisas de Madrid*, and *Rentas de arrendamiento*, are the produce of the alcavala and millones of that city, and of five leagues round, farmed by the gremios.

Patrimonial rents arise from thirds, tithes, reserved rents, and lands let to farm, in Catalonia, Arragon, Valencia, and Majorca.

Rent of the priory of S. Juan, or S. John, is mentioned only by Ustariz, because it was afterwards granted to the infant Don Gabriel.

The salt works yield a considerable revenue. These were formerly considered as private property; but, in the year 1348, they were taken by Alonzo II; and in 1564, Philip II. seized them as a part of his demesne. The chief of them are in Andalusia, Valencia, Catalonia, and Majorca. The salt-works of Mata, in the kingdom of Valencia, would easily furnish one million and a half fanegas, of about one hundred pounds weight, which, could they find a market, would, at twenty-two reals the fanega, make three hundred and thirty thousand pounds sterling, *per annum*; but, by raising the price, they have lessened the demand: so that the whole amount of the kingdom is only about two-thirds of what one work alone might furnish.

Stamp-Duties were introduced in 1637.

Subsidy is one *per cent.* granted by the pope to the kings of Spain, upon all ecclesiastical rents in their dominions, for the war against the infidels.

Salt-petre, *sulphur*, and *gun-powder*, sealing-wax, quicksilver, and

tobacco, are all royal monopolies. Of the latter I shall speak more particularly, when I come to treat of Seville. It was granted by the cortes, A. D. 1336.

Wool. In the year 1437, a tax was imposed on all wool in general, called *Servicio y montazgo;* but, to encourage the production, this was changed by Ferdinand VI. into a duty on *fine* wool *exported.* The coarse wool is kept at home.

In my schedule, the Indian revenue is stated by Ustariz, at forty millions, and by Count de Grepi, the imperial consul, at more than ten times as much. The former means the nett produce; the latter takes the gross amount. Mr. Liston's average of ten years agrees nearly with Ustariz; but Mr. Carmichael, the American envoy, states sixty millions. The fact, however, is, if we may believe those who are the best informed, that the Spanish colonies yield no direct revenue to the mother country. This being the case, I cannot conceive upon what authority, the Abbé Raynal states the clear revenue from America at thirty-four millions five hundred thousand livres, or, in reals vellón, at one hundred thirty-eight millions clear, besides eighty-two millions, three hundred and thirty-seven thousand, eight hundred reals paid for duties in Europe.

Count de Grepi states the revenue in America as follows:

	Reals Vellon.
Customs on European commodities, according to the years 1785 and 1786 - - - - - - - -	42,240,000
Alcavala on ditto, introduced A. D. 1591 - -	54,120,000

Tobacco-rent in New Spain and other provinces introduced A. D. 1752	100,000,000
Duties on gold and silver exported	60,000,000
Tribute of the Indians	40,000,000
Crusades, introduced A. D. 1509	20,000,000
Quicksilver sold	6,000,000
Stamp-duties, introduced A. D. 1641	20,000,000
Coinage	6,000,000
Acapulco trade	10,000,000
Sale of the herb Mathé	10,000,000
Sale of paper on the king's account	10,000,000
Rents of the Jesuits	8,000,000
Cards, and other monopolies	6,000,000
Rents of the Philippines	30,000,000
Tax on Negroes	4,000,000
Reals Vellon	426,360,000

The alcavalas on American productions are omitted, as are also some other taxes, of which the count was not able to procure any information.

The following schedule will shew the produce of the taxes in the royal treasury. To reduce the reals to pounds sterling, drop the two last figures, because one pound is equal to one hundred reals vellon.

A DIGEST OF THE SPANISH REVENUE,

Taken from authentic Documents.

	Ustariz, 1722.	Official account 1768.	Count de Grepi 1774.	Zienowieff, 1778, by approximation.	Carmichael average of 5 years.	Liston, average of 10 years, 1778.
Annats medias annatas	—	521,110	1,382,060	1,300,000	1,470,000	1,986,000
Aposento on houses M	—	—	1,133,714	1,200,000	1,000,000	1,084,257
Brandy	—	—	4,524,817	4,525,000	1,500,000	
Cards	—	289,863	1,493,367	1,500,000	1,000,000	400,233
Catalonia and Arragon	33,980,000	—	—	47,000,000	30,529,303	32,109,481
Coinage	—	—	—	—	140,000	235,779
Crusades	with subsidy	17,293,740	17,782,380	20,000,000	16,000,000	11,052,209
Effects of the Camera	—	—	785,639	786,800	—	340,237
Excusado	with subsidy	11,908,700	2,133,166	12,000,000	10,000,000	8,525,000
Extraordinaries	—	—	53,965,131	35,000,000		
Fines of the Camera	302,000	—	71,314	72,000	950,000	711,030
Indian revenue	40,000,000	—	426,360,000	240,000,000	60,000,000	39,899,918
Lances	500,000	—	—	card to annats	1,590,000	card to annats
Lead	—	1,226,900	1,217,186	—	450,000	3,241,097
Lottery	—	—	4,079,416	4,500,000	—	4,192,000
Manufacture of glass, St. Ild.	—	—	1,230,826	—	—	6,213,686
——— of cloth	—	—	1,158,692	—		

Masterships of military orders	240,000	1,4,48845	—	1,800,000	2,600,000	1,128,050
Notaries	—	—	61,688	62,000		
Pasture of masterships	511,170	424,467	847,186	—	3,000,000	426,645
—— of Serena	2,602,120	258,948	124,679	140,000	—	
Posts	2,484,060	—	—	34,000,000		
Powder and saltpetre	—	1,091,021	—	—	1,200,000	2,835,3t4
Public houses in Madrid	—	—	195,284	196,800		
Proprios and Arbitrios	—	—	425,233	500,000	—	1,196,005
Rents general Aduana	25,023,444	55,944,822	48,030,602	48,060,000	31,949,102	70,584,604
—— provincial	61,801,630	90,825,120	62,583,706	130,000,000	73,010,902	97,948,256
—— of Madrid	2, 81,03602	—	6,417,551	6,418,552	5,500,000	6,538,856
—— patrimonial	25,310	—	—	—	741,800	
—— of S. Juan	229,070					
Salt works	17,000,000	23,633,251	19,937,194	20,000,000	20,749,208	26,508,384
Stamp duties	891,950	4,127,269	4,311,886	4,312,000	3,300,000	2,489,308
Subsidy	14,000,000	3,576,497	4,831,850	card to Excusado	3,530,000	5,865,310
Sulphur	—	117,431	—	—	—	305,311
Tobacco	14, 278, 030	66,866,319	68,960,855	80,000,000	70,000,000	67,138,082
Wool	—	12,602,304	14,458,271	14,500,000	16,549,767	17,397,745
Sundries	4,930,000	—	—	—	3,615,000	6,912,008
	232,946,744	292,192,587	748,103,873	707,873,152	360,375,082	47,264,835

COPY OF AN OFFICIAL PAPER,

Stating the Revenue as it stood A. D. 1786.

	Rents.	Persons employed.	Salaries.	Expenses.	Nett produce in reals vellon.
Pastures of the Serena	280,977	12	17,100	4,929	258,948
Masterships of military orders	4,158,486	17	15,764	2,657,877	1,484,845
Tobacco	101,226,189	18,291	21,878,505	12,481,365	66,166,319
Rents, general and aggregate	67,259,482	4,443	6,540,248	4,744,412	55,944,822
Salt-works	37,200,610	—	3,935,979	9,641,389	23,633,251
Pasture of masterships	458,847	16	30,220	4,170	424,457
Provincial rents	102,113,467	2,249	7,016,836	4,271,521	90,825,116
Lead duty	1,668,126	100	441,226	—	1,226,900
Cards	724,355	8	12,433	422,059	289,863
Powder and saltpetre	3,401,041	117	570,054	1,739,965	1,091,021
Sulphur	242,567	5	31,198	93,938	116431
Bulls of Crusade	18,663,440	49	354,253	1,015,447	17,293,740
Stamp duties	5,545,745	104	330,430	1,087,946	4,127,209
Excusado	12,000,000	13	91,300	—	11,908,700
Subsidio	3,576,497	—	—	—	*3,576,497*
Medias annatas	633,610	14	112,500	—	521,110
Wool, and aggregate rents	14,998,284	223	584,505	1,811,475	12,602,304

I procured from the foreign ministers various statements of the expenditure, such as they transmitted to their several courts, but the one with which I was most satisfied, I had from D. Estevan Zienowieff, ambassador from Russia, confirmed by that of Mr. Liston, our own minister, on whose accuracy I could depend.

Expenditure, 1778.

	Reals Vell.	Reals Vellon.
To royal *houshold*	24,000,000	
To pensions to the princes	10,000,000	
To royal chapel	2000,000	
To pensions for superannuated servants . .	3,000,000	
To wardrobe and jewellery	8,000,000	
To journeys to the sitios	15,000,000	
To stables	12,000,000	
To hunting, including damages	18,000,000	
To charities and offering	5,000,000	
To buildings	9,000,000	
To secret services of the court	2,000,000	
		108,000,000
To *military*, for life guards	18,000,000	
To infantry, 45 regiments of 953	39,235,810	
To miiltia, 10,880	5,848,036	
To artillery, with officers, 3,050	4,439,008	

To invalids, 7,200	6,289,357	
To engineers	1,400,000	
To cavalry, 14 regiments of 480	10,581,815	
To dragoons 8 regiments of 480	5,763,882	
To general officers	3,600,000	
To treasurers, commissaries, &c.	10,344,282	
To fortifications	12,000,000	
To clothing, forage, &c.	74,021,389	
To widows of officers and orphans	4,378,615	
To military hospitals	5,800,000	
To recruiting service in foreign countries	700,000	
To department of council of war	1,000,000	
To minister of war and comis	800,000	
		204,202,194
To *navy*, for 64 ships of the line, and 47 frigates, 50,000 sailors, 12,096 marines	—	100,000,000
To department of the *Indies*	—	8,000,000
To department of finance	—	4,500,000
To ditto of justice	—	1,100,000
To tribunals of justice	—	8,422,769
To *foreign* department for the minister and his comis	1,140,000	
To ambassador at Rome	900,000	
Ditto at London	710,000	
Ditto at other courts	6,003,162	
To couriers, consuls, and secret service	6,000,000	
		14,753,162

To china manufactory at Retiro	436,188	
To Goblin tapestry and Persion carpet . . .	397,100	
To painters, architects, and pensions . . .	440,000	
To academy, cabinet, and library	900,000	
To hospitals	400,000	
To highways and canals	4,000,000	
To pensions to strangers and incidents . . .	3,600,000	
		9,873,288
To interest of their debts, and liquidation . .	—	30,000,000
Total reals vellon . . .	—	488,851,413

In the preceding estimate, the china manufacture at the Buen Retiro, is made debtor only four hundred and thirty-six thousand one hundred and eighty-eight reals; but from the extent of the concern, and from a more minute account received from Mr. Carmichael, I am inclined to think that one million has been inadvertently omitted; it would then stand one million four hundred and thirty-six thousand one hundred and eighty-eight reals. Besides this mistake, if it be one, the expense of the glass manufacture is here overlooked, which Mr. Carmichael states at one million one hundred and thirty-six thousand eight hundred and eighty-four; and the loss by the cloth manufactures, which is not stated. Yet, in the government returns, the manufactures of glass and cloth are reported to yield, on the average of ten years, six million two hundred and thirteen thousand six hundred and eighty-six reals profit.

From an attentive examination of all that I have been able to collect, I am persuaded that the revenue has not for many years been equal to the expenditure; and whilst I was at Oviedo, in the year 1786, the minister of the finance, in his circular letter sent through all the provinces, urged the collectors to diligence and strict attention in the collection of the taxes; because the expenses of government were forty millions of reals more than the revenue. Since I quitted Spain, the revenue is increased, and from good authority I understand, that the last statement of Mr. Eden is five hundred millions, or five millions British, and that now they have a surplus of revenne to discharge former debts.

The debts are of various kinds; some ancient, others more recent. The former date their origin from the revolt of the Belgic provinces, A. D. 1566; and a conflict of more than three and forty years, during which, contracting a debt of two hundred million of dollars, Spain, without effect, attempted to reduce them, left such derangement in her finances, that she has ever since been crippled in all her operations, when at any time she hath found herself engaged in war. The country, exhausted by this long continued contest, cried universally for peace, and Philip III. A. D. 1609, although he would not acknowledge the sovereignty of the new republic, consented to a truce; but his successor, having other views, provoked hostilities, carried on a very expensive war, and before he consented to the peace of Munster, and to the independency of the United Provinces, A. D. 1646, discovered that he had doubled the debt; which, therefore amounted to about sixty millions of our money.

The principal creditors were the Genoese, and other foreign merchants, to whom, as security for payment of the principal with interest, government assigned certain portions of the revenue: which were denominated *juros*, because they passed like other property, either by descent or transfer.

These Genoese, and other foreign merchants, being, after the expulsion of the Jews, the chief farmers of the revenue, and being at the same time the principal creditors, are accused of innumerable frauds against the public, and this with both the connivance and participation of the clerks and comptrollers of the treasury. When their evil practices were brought to light, they sold their *juros* to the natives, to the gremios, to the convents, and to the principal nobility; yet frauds continued, and thus administered, the interest of the debt swallowed up the whole of the revenue.

In order, therefore, to redeem the *juros;* the tax called millones, or a species of excise already spoken of under the article of provincial rents, was granted by the cortes; yet the deficit continued. In consequence of this, many, whose ancestors had purchased *juros*, were happy to sell them at a loss of ninety per cent. whilst the Genoese and strangers, still farmers of the revenue, being purchasers, paid them back for rent to government at par.

These abuses did not escape the notice of the writers, who were most distinguished for their abilities and zeal; but government paid no attention to this branch of political œconomy. Much salutary advice was given, although to little purpose, and no step was taken to remedy this evil, till the dynasty was changed, and an heir of the house of Bourbon succeeded to the throne.

This monarch, Philip V. reduced the interest, which had originally been five, ten, or even fifteen per cent. to three, which was the legal standard; but it was not till 1749, that a board was established and commissioners appointed to examine the *juros*, and to settle accounts with the proprietors. Compomanes Ed. Pop. Apend. i. 211—250. Ap. iv. 36—380.

At different periods, considerable debts have been discharged, paying those proprietors who made the most advantageous offers to the state, and were willing to part with their interest in the revenue on the lowest terms; but at the same time, the sum total of the debt, if we take into consideration the arrears of interest, has been constantly increasing.

To give a more distinct idea of this incumbrance, I shall, on the authority of Count Campomanes, state the debt, for which the millones or excise duties of Madrid have been given as security, and from this instance we may form some judgment of the rest; observing here, as I have done frequently already, that by dropping the two last figures you convert the reals into pounds.

This debt, A. D. 1685, was one hundred and eighty-seven million, five hundred thousand reals, the interest of which at five per cent. would have been nine million, three hundred and seventy-five thousand reals, but the excise duties of Madrid being farmed at eight millions, eight hundred and forty-one thousand, one hundred and seventy-six reals, there was consequently a deficit.

A. D. 1775. The debt, some portion of which bore interest at three, whilst the remainder by compact stood at two and a half per cent. was found to be increased to

	Reals Vellon.
	206,782,159

Arrears of interest to creditors - - - -	74,872,546
Due from the Junta de Abastos to the Gremios -	6,002,624
Ditto — to the Junta de Sisas - - - -	4,987,220
	292,644,549
Deduct paid off with considerable voluntary loss to creditors - - - - - - - - - -	5,643,546
Total of the debt	287,001,003

From this statement it is visible that since the year 1685, including arrears of interest, this part of the public incumbrance, instead of being lessened, is increased nearly a hundred millions of reals, or one million sterling.

The second class of public debts are those contracted by the emperor Charles V. in his rash wars. These amounted according to the Abbé Raynal, to one thousand million of livres tournois; which, at twenty-four livres to the pound, is £41,666,666. But the interest of this being then more than the whole revenue, the state, in the year 1688, became bankrupt.

At the death of Charles II. and the accession of a new family, public credit was restored; and in less than half a century, Philip V. availing himself of this reviving confidence, contracted fresh engagements, to the amount of near seven millions sterling. His successor Ferdinand VI. consulted the most learned casuists in his empire upon

this question, Whether a sovereign is bound to pay the debts of the preceding monarch? This simple question was solemnly determined in the negative. It being therefore settled, that the king should not discharge these engagements, Ferdinand accumulated treasure, and left his coffers well replenished. Charles III. found, according to the Abbé Raynal, one hundred and sixty million of livres in his treasury on his accession, and formed the pious resolution of paying all his father's debts; but when he had expended half this sum, he consumed the remaining part in fruitless wars. Like his predecessors, to gain the good opinion of his subjects, he remitted all the arrears due for taxes, from the several provinces and cities of his empire, which to many of them was no small favour, because, excepting Gallicia, most of them are very tardy in their payments.

Thus matters stood, till the Spaniards entered into the last war for the emancipation of America; when, feeling distress for want of money, the minister thought of trying how far he could avail himself of paper credit; an expedient little suited to the genius of a despotic government, and least of all to one, which had never shewn regard to public faith. He began with issuing nine million of dollars, in fifteen thousand notes of six hundred dollars each, bearing interest at four per cent. Of this transaction I shall have occasion to speak further, when I come to treat of the new bank, which has so far restored the credit of this paper, that, from being at twenty-four per cent. discount, it now bears a premium.

Government allows the emission of twenty-eight million, seven hundred and ninety-nine thousand, nine hundred dollars, at three several

periods during the war; but professes to have withdrawn one million, two hundred thousand; so that, estimating the dollar at three shillings, the whole of this debt is £4,189,985, and the annual interest of this £165,599, a trifling incumbrance, when, compared to the debts of France and England. The *juros* are not here to be carried to the account, because they are deducted out of the gross produce of the revenue, and the amount I have stated is only what it clears.

All good Spaniards have exclaimed against the operation of their taxes; and, in consequence of these expostulations, as far as relates to foreign trade, government has so regulated the customs upon imports and exports, upon goods manufactured, and upon raw materials, as to encourage home productions; but then the alcavalas and millones operate so powerfully against these provisions, that the manufacturer cannot lift up his head, nor stand the competition with nations, who are blessed with a wiser system of finance.

The alcavala, with its four cientos, being a tax of fourteen per cent. on every thing that is sold or bartered, even for oxen and mules used in husbandry, for the raw materials used in manufactures, and for the commodity itself when sold, and this not once for all, but as often as the property is transferred: were this tax collected with rigour, it would create either a general stagnation or resistance, and, perhaps, some effectual remedy against it.

The operation of the millones is not more favourable to manufactures. This tax may be considered as an additional alcavala, under another name, confined wholly to provisions, and is collected with such rigour, that even private families are obliged to pay eight reals,

or *1s. 7½d.* for every sheep or pig killed upon their own estate, and destined for their own consumption.

When the Marquis de la Eusenada, prime minister to Ferdinand VI. turned his attention to this business, he saw clearly that Spain could never rise up into consideration under the pressure of such taxes, and therefore he conceived the idea of substituting in their place one contribution, to be settled according to every man's ability, the whole amount being equivalent to the sum antecedently collected. For this purpose he established a commission of thirty thousand persons, to make the proper investigations, and to carry his purpose into execution. Before he could accomplish this arduous undertaking, his master died; Charles III. succeeded to the throne; and he was permitted to retire. His successor, a man of singular abilities, never lost sight of so excellent a plan. This was the Marquis of Squilace, who, having served with the king in Italy, as commissary general, attended him to Spain, became his minister, and by his intrigues, soon contrived that every power in the state should centre in himself. This extraordinary man has been accused of rapacity; but however that may be, certain it is, that Spain, had he continued in office, would have had abundant reason to admire the wisdom of his government. To him the people of Madrid are indebted, not only for the cleanliness of its streets, but for their safety from assassins, because he made them lay aside their *capa* and their slouched hats, by which both their persons and their purposes had been effectually concealed. This innovation, however excellent, this violence offered to deep rooted prejudices, excited indignation; and

being accompanied by an accidental scarcity of corn, raised a storm, which nothing but his disgrace was able to allay. The sovereign himself felt the shock upon his throne, and fled with his favourite, but was soon prevailed upon to return, and to shew himself to his enraged people from the balcony, where the venerable Count of Revillagigedo, viceroy of Mexico, on whose word they could depend, assured them that the object of their resentment was dismissed, and would never more return. The storm subsided; Squilace retired to Italy; and thus, in one moment of popular frenzy, all his well digested plans for the reformation of the finance, the encouragement of manufactures and the renovation of the empire, were rendered ineffectual, and vanished with himself.

The commissioners who were appointed to take the value of all the land, industry, and commerce of the twenty-two provinces comprehended in the kingdom of Castille, after having made a deduction of one-third for accidents, estimated the remainder at two thousand one hundred and fifty-two millions, one hundred and fifty-seven thousand three hundred and sixty-four reals vellon, or a little more than one and twenty millions and a half sterling. Then having calculated the average of the provincial rents at one hundred and thirty-nine millions reals vellon, or £1,390,000, to raise an equivalent for this sum, it was found necessary to impose 6$\frac{1}{4}$ per cent. on lands, houses, industry, and commerce, including physicians, comedians, musicians, servants, labourers, and artists, not excepting the clergy, who are stated as possessing two-fifths of all the cultivated land. For this purpose an edict was published in the year 1770; but

unfortunately, like some others, it remained without effect. One provision in this edict shewed the wisdom of the head that formed it; for it was ordained that fertile land, although uncultivated, should pay the tax.

We have seen, that the paper money issued by government was depreciated to twenty four per cent. when M. Cabarrus by the institution of a national bank, restored the public credit, and saved the country. This gentleman is distinguished for singular abilities, for a clear head, and for a ready elocution. I have related, on what occasion I had first the happiness of meeting him. He did me then the honour to take notice of me, and ever after admitted me when he had leisure to entertain his friends.

The bank of S. Carlos is too singular in its history to be passed by in silence. It met with rough usage in its beginning, but the indefatigable application of the projector, supported by the good sense of Count Florida Blanca, overcame all difficulties, and established it on a firm foundation, if we may call that firm, which the breath of a weak monarch, or one stroke of the pen of a wicked minister, can overthrow. At the first institution of the bank, it consisted of one hundred and fifty thousand shares, at two thousand reals each, constituting a capital of three millions sterling, with liberty to add annually three thousand shares, for thirty years, in order that there might not be one citizen of the Spanish empire, excluded from this beneficial enterprize.

To create a confidence in the public, the directors were not to enter into any speculation, except where the king should give them

a commission, for foreign and distant commerce, or to favour the agriculture and manufactures of the kingdom; and to remove all occasion of jealousy, the bank was to have *no exclusive privilege*, nor any monopoly; they were to receive at par, and thereby to procure circulation for the government paper, even at a time when it was from twenty to twenty-four per cent. discount.

By way of recompence, or, as it was called, equivalency, they were to make all contracts for the feeding and clothing of the army, and for the supply of the navy, receiving ten per cent. commission for their trouble, and four per cent. per annum for all the money they should advance. This grant was for twenty years. Besides this, they were to have the *extraction*, or *the exclusive privilege* of exporting specie, collecting from the merchant four per cent. for the use of government, and three for the bank. They were to have one per cent. on all remittances from the court of Madrid to its ministers in foreign parts, and four per cent. for discounting bills. No entail was to be valid against the demands of the bank.

Notwithstanding these encouragements, the Spaniards had no confidence in this new establishment, but either locked up their money in strong chests, or solicited the gremios to take it in at a low interest, whilst in France and Switzerland, monied men came into the scheme with such avidity, that actions bore a premium of three hundred per cent. till suddenly a panic seized them, and the whole fabric was in danger of ruin and destruction.

To regain their confidence, the bank bought in many actions, and lent money at *four* per cent. to the stockholders on the security of

their actions, engaging at the same time to pay them their dividend of *seven* per cent. or more, if it should be due. This strange manœuvre had the desired effect; for the proprietors in Paris, borrowing money of the bank to the amount of twenty millions of reals, for which they were charged only four, whilst, without any risk, they received nine per cent. their former eagerness returned, and the demand for actions was every where renewed.

It cannot be imagined that the bank long persevered in this strange practice. Such conduct must soon have stripped them of their capital; because every proprietor would have borrowed money to the full value of his actions, and the bank would have been annihilated. Therefore, at the fourth general meeting it was resolved, that no more than five hundred reals should be advanced on one action of two thousand.

The prosperous condition of this new establishment will appear from a statement of its annual gains.

A. D.		*Reals Vellon.*	*M.*
1783	The bank gained - - - -	3,301,255	8
1784	- - - - - - - -	17,137,622	22
1785	- - - - - - - -	48,346,675	18
1786	- - - - - - - -	20,473,093	13

In this last year, the actionists divided only seven per cent; but in the preceding they had nine, besides investing twenty-one millions of reals in the new Philippine company, of which I shall hereafter

treat. The reason of this difference in their profits, and the nature of their operations, will be clearly seen, by giving their reports to the proprietors at their annual meeting in the years 1785 and 1786.

1785.

	Reals.	M.
By interest on government paper - - -	3,569,533	27
By discount of bills - - - - - -	1,260,519	18
By interest on money advanced on actions -	594,106	23
Ditto — for America - - - - - -	503,118	32
Ditto — provisions of the army - - - -	1,435,109	12
Ditto — Cadiz department - - - - -	617,180	28
By interest on money advanced on letters of exchange	1,411,904	5
By commission of one per cent. for the crown -	253,164	14
Ditto — for America - - - - - -	197,450	3
Ditto — Cadiz - - - - - - -	870,913	29
By extraction of specie, at three per cent. -	11,883,656	23
By commission of ten per cent. on provisions -	3,066,763	3
Ditto — for *presidios* - - - - - -	407,024	32
Ditto — of the navy - - - - - -	1,187,221	13
Ditto — timber - - - - - -	765,892	29
Ditto — iron - - - - - -	201,434	27
By increase of value on actions - -	21,552,840	00
	49,777,835	12
Deduct expences -	1,431,159	28
Total gain - -	48,346,675,	18

Deduct investment in Philippine company -	21,000,000	00
Remains to be divided - - - - -	27,346,675	18

1786.

	Reals.	*M.*
By interest on government paper - - -	936,920	00
By discount of bills, deducting brokerage -	2,513,857	32
By interest of money advanced on actions -	2,386,803	15
By operations of the bank at Cadiz - -	4,007,960	20
By letters of exchange for government - -	20,602	15
By commission of one per cent. for the crown	247,264	28
Ditto — for America - - - - - -	3,963	1
By extraction of specie at three per cent. -	10,254,299	22
By profit on purchase and sale of actions -	310,960	00
By increase of value on five thousand four hundred and fifty-three actions bought in - - -	1,616,210	20
	22,278,842	17
Deduct charges of administration - - -	1,805,749	4
Remains to be divided - - - - -	20,473,093	13

By this statement it appears, that,

1st. The credit of the bank procured a ready circulation for the government paper; because the interest of that proportion, which,

during the course of the year, was in the possession of the bank, sunk from more than three millions and a half to less than one million.

2nd. The discounting business increased to nearly double in the space of twelve months.

3rd. The interest for money advanced on actions, shews clearly, that the proprietors of one-fifth part of the whole capital had withdrawn their proportion; willing at the same time to take their chance for a dividend, at the sole risk of those, who, from rashness, from folly, or from inattention, neglected to follow their example.

4th. The extraction or exportation of specie sunk considerably. It was naturally to be expected that this should be the case. Previous to the institution of the bank, when government permitted the exportation of specie, it was under a duty of four per cent. the average produce of which was about three millions of reals; but when it became the interest of the bank to watch the smuggler, the duties rose to sixteen millions. Merchants, however, when one road is stopped, exert their sagacity to find out some other; and where such a commodity as silver is in question, they easily surmount the obstacles opposed to its exportation.

5th. One source of profit, producing more than five millions and a half in the year 1785, is in the subsequent year, dried up. This matter requires to be explained.

The government being much distressed for money, had, as all spendthrifts are forced to do, borrowed on very disadvantageous terms, and then repented of the hard conditions, to which it had consented.

The commission of ten per cent. appeared exorbitant; and the vouchers produced by the directors of the bank, for the articles they had purchased on account of the army and the navy, were not satisfactory to the minister of the finance. Besides these objections, the exhausted treasury was not in a condition to discharge its most reasonable obligations to the bank, and to pay those arrears which itself acknowledged to be just. All was in confusion; the minister continued muttering his threats, and the projector of the bank was loud in his expostulations. The latter suggested, with great propriety, that, in a country, where justice and the laws were silent, and where arbitrary power prevailed, the minister might for once plunder and seize with a strong hand, the whole of their capital; but, that in such a case, he must not expect to be trusted a second time, and must therefore renounce for ever all idea of a bank. This argument was felt; and the minister determined, that the bank should have the contract for the army and the navy at the same prices as had been last given to the gremios, and that this new regulation should have a retrospect. The bargain was thus made more advantageous to the public; but how far this transaction was agreeable to justice, it was for the minister of the finance to say.

The gremios, or the five incorporated companies of Madrid, have a joint capital, as factors, to purchase all commodities, and sell to the retail dealers; the manufacturers being prohibited by law to sell by retail. This body, with a considerable capital of its own, and borrowing as much as it conld employ, at two per cent. had all the contracts for the court, for the presidios, and for the army, both for

food and clothing; but since the establishment of the bank, this monopoly has shifted hands; and government, instead of availing itself of the competition between the gremios and the bank, has delivered itself up to the latter, for the advancement of its credit.

But, as it would not be sufficient to grant beneficial contracts, without fulfilling its engagements, government agreed to give an assignment of the four per cent. duties on the extraction of silver for three years, unless the arrears to the bank, should be previously discharged.

Upon coming thus to a mutual understanding, the directors of the bank agreed to advance money for making a canal from Guadarama, at the foot of the Sierra which divides the two Castilles, to Seville, and to superintend the work, receiving ten per cent. commission, and four per cent. per annum, for all the money they should expend.

I might proceed to give some idea of the Philippine company, in which the bank has engaged two hundred and ten thousand pounds sterling, as I have already stated; but this I shall reserve till I come to Cadiz, when I shall have occasion to treat of commerce, and more especially of the trade carried on between the mother country and its colonies.

END OF VOL. I.

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INDEX TO THE FIRST VOLUME.

Alcalde 179
Anchuela 169
Anover 211
Aranjuez 231
Avila 349
Aviles 304-318
Bank of S. Charles 422
Barcelona 88-140
Batida 370
Bull-Feast 243
Canal Arragon 157
——Castille 259
Carinana 160
Catalans, their industry 85
Celibacy of Clergy 387
Chalk 26, 47, 145
Curate's habitation 278
Curtis Dr. 333
Dresses 137, 149, 349
Escurial 356
Figueras 79
Granite 48, 49, 77, 125, 348
Ditto decomposed 48, 82, 127, 217, 252, 256, 332, 343
Gryphites 49
Guadalajara 175
Gypsum 145, 167, 241
Hunt Royal 370
Ildefonso 356, 363
Leon 266, 327
Luanjo 311
Lyons 50
Madrid 182, 251, 430
Marble 49, 166, 270
Masdeval 147
Medina 263
Merino Sheep 324, 348
Monjuich 127
Montpelier 57-68
Montserrat 143
Monumental Crosses 163
Nismes 159
Nitre 195-201
Norias 69
Oviedo 283-322
Perpignan 71
Pyrenees 72
Revenue 392-421
Salamanca 333-344
Saltpetre v Nitre .....
Segovia 361
Sheep see Merino .....
Smuggling 73
Teresa 350
Test religious 385
Toledo 217-230
Trillo 255
Valence 56
Valladolid 257
War, its effects 53
Woollen Manufactory 175
Zaragoza 153

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